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Arizona Corporation Commission

DOCKETED

SEP 11 2003

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Attorneys for Arizona Water Company

**BEFORE THE ARIZONA CORPORATION COMMISSION**

IN THE MATTER OF THE APPLICATION  
OF ARIZONA WATER COMPANY, AN  
ARIZONA CORPORATION, FOR  
ADJUSTMENTS TO ITS RATES AND  
CHARGES FOR UTILITY SERVICE  
FURNISHED BY ITS EASTERN GROUP  
AND FOR CERTAIN RELATED  
APPROVALS.

Docket No. W-01445A-02-0619

**NOTICE OF FILING REJOINDER  
TESTIMONY**

Applicant, Arizona Water Company, hereby files the Rejoinder Testimony of William M. Garfield, Sheryl L. Hubbard, Ralph J. Kennedy and Thomas M. Zepp in the above-captioned docket.

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ORIGINAL

1 DATED this 11th day of September, 2003.

2 FENNEMORE CRAIG  
3 Norman D. James  
4 Jay L. Shapiro  
5 3003 North Central Avenue  
6 Suite 2600  
7 Phoenix, AZ 85012

8 --and--

9 ARIZONA WATER COMPANY  
10 Robert W. Geake  
11 3805 Black Canyon Highway  
12 Phoenix, Arizona 85015-5351

13 Attorneys for Applicant  
14 Arizona Water Company

15 By Robert W. Geake

16 An original and 13 copies of the  
17 foregoing, and attached documents  
18 were delivered this 11th day of  
19 September, 2003 to:

20 Docketing Supervisor  
21 Docket Control  
22 Arizona Corporation Commission  
23 1200 West Washington  
24 Phoenix, AZ 85007

25 A copy of the foregoing,  
26 Delivered/Mailed this 11th day of  
September, 2003, to:

[CONFIDENTIAL VERSION]  
Dwight D. Nodes  
Administrative Law Judge  
Hearing Division  
Arizona Corporation Commission  
1200 West Washington  
Phoenix, AZ 85007

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22  
23 By: Robert W. Seale

# ***ARIZONA WATER COMPANY***



Docket No. W-1445A-02-0619

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**2002 RATE HEARING EXHIBIT NO. \_\_\_\_**

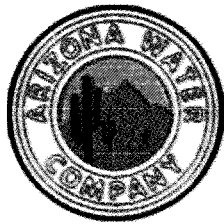
**For Test Year Ending 12/31/01**

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**PREPARED**  
**REJOINDER TESTIMONIES & EXHIBITS**

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**ARIZONA WATER COMPANY**



**Docket No. W-1445A-02-0619**

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**2002 RATE HEARING EXHIBIT NO. \_\_\_\_**

**For Test Year Ending 12/31/01**

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**PREPARED  
REJOINDER TESTIMONY & EXHIBITS  
OF  
William M. Garfield**

---

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7

8 **BEFORE THE ARIZONA CORPORATION COMMISSION**

9  
10 IN THE MATTER OF THE  
APPLICATION OF ARIZONA WATER  
COMPANY, AN ARIZONA  
11 CORPORATION, FOR ADJUSTMENTS  
TO ITS RATES AND CHARGES FOR  
12 UTILITY SERVICE FURNISHED BY  
ITS EASTERN GROUP AND FOR  
13 CERTAIN RELATED APPROVALS.

Docket No. W-01445A-02-0619

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19 **REJOINDER TESTIMONY OF WILLIAM M. GARFIELD**  
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1 **I. INTRODUCTION**

2 **Q. WHAT ARE YOUR NAME, EMPLOYER AND OCCUPATION?**

3 A. My name is William M. Garfield. I am employed by Arizona Water Company (the  
4 "Company" or "AWC") as President.

5 **Q. ARE YOU THE SAME WILLIAM M. GARFIELD THAT PREVIOUSLY**  
6 **SUBMITTED DIRECT TESTIMONY AND REBUTTAL TESTIMONY IN**  
7 **THIS MATTER?**

8 A. Yes, I am.

9 **II. OVERVIEW, PURPOSE AND EXTENT OF TESTIMONY**

10 **Q. WHAT IS THE PURPOSE OF YOUR REJOINDER TESTIMONY IN THIS**  
11 **PROCEEDING?**

12 A. The purpose of my rejoinder testimony is to respond to certain surrebuttal  
13 testimony submitted by the Arizona Corporation Commission's Utilities Division  
14 Staff ("Staff") and the Residential Utility Consumer Office ("RUCO") in this rate  
15 proceeding. Specifically, I will present the Company's rejoinder position with  
16 respect to certain portions of the Pinal Creek Group matter, the effects of Staff's  
17 tiered rate design, RUCO's position on higher than average rates of return for well  
18 run water utilities and Staff's position on water system losses.

19 **III. RESPONSE TO SURREBUTTAL TESTIMONY OF STAFF**

20 **Q. DO YOU AGREE WITH MR. THORNTON'S SURREBUTTAL**  
21 **TESTIMONY CONCERNING STAFF'S RATE DESIGN AND THE**  
22 **RESULTING SUBSIDIES?**

23 A. No, I do not. Although Mr. Thornton states that it was not Staff's intent to provide  
24 any subsidies beyond the lifeline rate, the fact remains that Staff's rate design will  
25 result in subsidies from commercial, industrial, other non-residential customers,  
26 and large meter customers to residential customers, as I previously testified in my



1 rebuttal testimony. Since Staff claims that it was not their intent to subsidize  
2 customers other than through the lifeline rate, and since it is clear that there is  
3 significant subsidization resulting from Staff's tiered rate design, Staff's rate  
4 design should be rejected.

5 **Q. DO YOU AGREE WITH STAFF THAT A TEN PERCENT LOST WATER**  
6 **VALUE SHOULD BE USED AS AN INDICATOR THAT THERE IS A**  
7 **NEED TO EXAMINE WATER LOSSES MORE CLOSELY?**

8 A. No, I do not. The Company tracks water losses for all water systems and looks for  
9 changes in water system water losses as well as volumes of lost water. Just  
10 because a water system's water losses exceed ten percent (10%) does not  
11 necessarily mean that additional actions, such as conducting a water audit or  
12 instituting a more aggressive meter change out program are warranted.  
13 Consideration of many case specific facts must be completed before such actions  
14 are contemplated.

15 **Q. DO YOU AGREE WITH STAFF THAT TEN PERCENT (10%) AND**  
16 **FIFTEEN PERCENT (15%) WATER LOSS VALUES ARE GUIDEPOSTS**  
17 **WITHIN THE WATER INDUSTRY?**

18 A. No, and I do not agree with Staff or with the Arizona Department of Water  
19 Resources that a ten percent water loss is an industry standard. Although the July  
20 1996 article that Staff has included in its surrebuttal testimony refers to historically  
21 developed water loss criteria of ten percent (10%) and fifteen percent (15%), the  
22 article points out that water loss expressed as a percentage of water production is  
23 inappropriate and many other factors should be considered.

24 Staff apparently has not kept pace with water loss control strategies in the  
25 water industry and the factors by which water distribution system efficiency is  
26 currently measured. Referring to the "Water Loss Control Manual" published in

1 2002, and which the American Water Works Association's Leak Detection and  
2 Water Accountability Committee played a significant role in developing, the  
3 current standard for measuring water system operating efficiency includes those  
4 factors identified in my previous rebuttal testimony. *See* Garfield Rebuttal  
5 Testimony Pages 24-25.

6 **Q. WHAT TYPE OF INFORMATION IS STAFF RECOMMENDING THE**  
7 **COMPANY COMPILE CONCERNING WATER LOSS?**

8 **A.** Contrary to Staff's assertion that "all that Staff is requesting is that the Company  
9 quantify, compile and present the pertinent information," (Surrebuttal Testimony of  
10 Lyndon Hammon ("Hammon Surrebuttal") at Page 2 Lines 10-11), Mr. Hammon's  
11 direct testimony provides a recommendation that the Company perform a water  
12 audit and system analysis. Direct Testimony of Lyndon Hammon at Page 5 Lines  
13 5-7. In addition, Staff also recommends that the Company be required to submit a  
14 plan to the Director of the Utilities Division of the Commission outlining the  
15 procedures, steps, and time frames to achieve acceptable water losses. Direct  
16 Testimony of Lyndon Hammon at Page 6 Lines 1-4.

17 For those water systems with water losses above ten percent (10%), the  
18 Company would then be required to submit a report, containing detailed cost  
19 analyses and explanations why a water loss reduction to less than ten percent  
20 (10%) could not be achieved. Lastly, such reports and water loss plans would be  
21 submitted to the Director of Utilities, who would then have the authority to institute  
22 a formal proceeding before the Commission to require modifications to the plans.  
23 This would be true, despite the fact that the ten percent (10%) and fifteen percent  
24 (15%) may not be new or unusual, as Staff points out, nor are they representative  
25 of current industry standards or reflective of the facts surrounding each water  
26 system in which water losses may be at or above ten percent (10%).

1           In sum, the Company previously identified a number of factors affecting  
2 water losses demonstrating that the Company has a current water loss control  
3 management plan in place. This is not to say that the Company objects to working  
4 with Staff outside of this proceeding to address water loss by providing information  
5 on the measures taken by the Company in reducing or maintaining water loss to an  
6 acceptable level, providing copies of monthly water loss reports, etc. However, the  
7 Company does object to being required to file reports and water loss control plans  
8 as a precondition to approval of the Company's application to adjust rates in this  
9 matter. Staff has not demonstrated that the Company's management of water loss  
10 control is inadequate, but instead applies an arbitrary ten percent (10%) or fifteen  
11 percent (15%) factor that is contrary to current water loss control methods and  
12 practices. Absent such a demonstration, the Company's efforts to avoid and  
13 minimize water loss do not require the regulatory micromanagement Staff  
14 recommends in this rate case.

15 **Q. DO YOU AGREE WITH STAFF CONCERNING THEIR REQUIREMENT**  
16 **THAT THE COMPANY FILE A CURTAILMENT PLAN WITH THE**  
17 **COMMISSION WITHIN 120 DAYS FROM THE EFFECTIVE DATE OF A**  
18 **DECISION IN THIS MATTER?**

19 **A.** The issue of curtailment tariffs is an industry-wide issue that should not be handled  
20 in a piecemeal fashion, but the Company is willing to file a Company-wide  
21 curtailment tariff.

22 **Q. DO YOU AGREE WITH STAFF THAT THE PROPOSED ADJUSTMENT**  
23 **TO THE MIAMI POWER ADJUSTMENT WAS AN APPROPRIATE**  
24 **ADJUSTMENT AND THAT THE COMPANY DID NOT ADEQUATELY**  
25 **SUPPORT ITS POSITION?**

26 **A.** No, I do not. Staff has proposed adjustments relating to the Company's Miami

1 water system reducing the Company's allowable operating expenses by \$39,000  
2 based on an amount calculated by Staff on the assumption that the Company will  
3 be receiving the maximum amount of water under the PCG Settlement in the form  
4 of free water delivered to the Company's Miami water system from wells owned or  
5 controlled by the PCG. But that's only an assumption; it is not a fact. The  
6 evidentiary standard of "known and measurable" cannot be met by the Staff's  
7 direct or surrebuttal testimony on this point or by any of Staff's schedules since the  
8 Staff's proposal is not based on "known and measurable" costs.

9 Besides the fact that the Staff has misinterpreted the PCG Settlement, they  
10 are flatly incorrect concerning the provision of free water until October 2028. The  
11 Company was unable to provide work papers or a schedule showing an alternative  
12 proposal since there is no known and measurable cost information on which to  
13 make any such proposal, making Staff's criticism unwarranted. *See Hammon*  
14 *Surrebuttal Testimony at Page 3 Lines 22-27.* Nevertheless, the Company's  
15 schedules included with its direct testimony provided cost information, including  
16 that quantity of free water delivered to the Company's Miami water system by the  
17 PCG for the 2001 test year. In that respect, the Company has met the burden of  
18 proof on such cost information based on known and measurable data. In contrast,  
19 the Staff has no known and measurable information on which to base its \$39,000  
20 adjustment to lower allowable operating expenses for the Miami water system and  
21 Staff's proposed adjustment should be rejected.

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**Q. DO YOU AGREE WITH RUCO THAT WELL RUN UTILITIES SHOULD NOT BE ENTITLED TO A HIGHER THAN AVERAGE RATE OF RETURN WHEN COMPARED WITH UTILITIES THAT ARE POORLY RUN?**

A. No, I do not agree with RUCO on this point. RUCO's argument is based on an ill-conceived notion that there are only two types of utilities; those utilities that are complying with the Commission's requirements and expectations, (i.e., well run utilities) and those utilities that are not complying (i.e., poorly run utilities). RUCO's point is that if you perform, you get a reasonable rate of return and if you don't perform you are forced out of business by the Commission. In RUCO's explanation, there doesn't seem to be any other performance standard upon which you can distinguish between utilities that continue in the utility business. See Rigsby Surrebuttal Testimony at 26-27.

Contrary to RUCO's characterization of the "continuing" and "non-continuing" categories of utilities, however, there are many differences between how utilities operate, some operating more efficiently, like Arizona Water Company, and some operating less efficiently. RUCO recognizes that the Company is well run and that its customers benefit from stable water supplies, safe drinking water and lower costs as a result. For these reasons alone, well run water utilities should be allowed a higher than average rate of return. The Commission should approve a higher than average rate of return for the Company in this rate

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proceeding.

**Q. DOES THIS CONCLUDE YOUR REJOINDER TESTIMONY?**

A. Yes, it does, except that I wish to note that my silence on any issue raised or recommendation made by Staff or RUCO in the surrebuttal testimony should not be taken as the Company's acceptance of such issue or recommendation.

1460217.1

**ARIZONA WATER COMPANY**



**Docket No. W-1445A-02-0619**

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**2002 RATE HEARING EXHIBIT NO. \_\_\_\_**

**For Test Year Ending 12/31/01**

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**PREPARED  
REJOINDER TESTIMONY & EXHIBITS  
OF  
Sheryl L. Hubbard**

---

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12 UTILITY SERVICE FURNISHED BY  
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13 CERTAIN RELATED APPROVALS.

Docket No. W-01445A-02-0619

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19 **REJOINDER TESTIMONY OF SHERYL L. HUBBARD**  
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III RATE BASE.....4

IV NET OPERATING INCOME.....11

V RESPONSE TO SURREBUTTAL TESTIMONY OF RUCO.....17

1 **I. INTRODUCTION**

2 **Q. WHAT ARE YOUR NAME, EMPLOYER AND OCCUPATION?**

3 A. My name is Sheryl L. Hubbard. I am employed by Arizona Water Company (the  
4 "Company" or "AWC") as Manager of Rates and Regulatory Accounting.

5 **Q. ARE YOU THE SAME SHERYL L. HUBBARD THAT PREVIOUSLY**  
6 **SUBMITTED DIRECT TESTIMONY AND REBUTTAL TESTIMONY IN**  
7 **THIS MATTER?**

8 A. Yes, I am.

9 **II. OVERVIEW, PURPOSE AND EXTENT OF TESTIMONY**

10 **Q. WHAT IS THE PURPOSE OF YOUR REJOINDER TESTIMONY IN THIS**  
11 **PROCEEDING?**

12 A. The purpose of my rejoinder testimony is to respond to certain surrebuttal  
13 testimony submitted by the Arizona Corporation Commission's Utilities Division  
14 Staff ("Staff") and the Residential Utility Consumer Office ("RUCO") in this rate  
15 proceeding. Specifically, I will present the Company's rejoinder position with  
16 respect to several elements of rate base including plant in service, accumulated  
17 depreciation, post test year plant additions, working capital allowance, deferred  
18 Central Arizona Project ("CAP") charges, and the Phoenix Office and Meter Shop  
19 allocations of plant-related items. In addition, I will address a number of items  
20 related to net operating income such as the revenue annualization, purchased power  
21 expenses, the Company's Purchased Power Adjustment Mechanism ("PPAM"), the  
22 Company's Purchased Water Adjustment Mechanism ("PWAM"), amortization of  
23 deferred CAP charges, water treatment expenses, rate case expenses, and  
24 amortization of Contributions in Aid of Construction.

25 I also wish to note that, to the extent that rejoinder testimony of other  
26 Company witnesses addresses surrebuttal positions proffered by Staff or RUCO

1 regarding the Pinal Creek Group ("PCG") settlement that have an impact on the  
2 Company's rejoinder schedules, I will provide an explanation of those impacts.

3 **Q. DOES YOUR TESTIMONY IN THIS PROCEEDING INCORPORATE**  
4 **RECOMMENDATIONS OF OTHER COMPANY WITNESSES?**

5 A. Yes, it does. My testimony in this proceeding incorporates recommendations  
6 sponsored by the Company's President William M. Garfield, as well as by Vice-  
7 Presidents Ralph J. Kennedy and Michael J. Whitehead throughout the course of  
8 the Company's presentation in this case.

9 **Q. ARE YOU SPONSORING ANY OF THE COMPANY'S REJOINDER**  
10 **EXHIBITS AND SCHEDULES?**

11 A. Yes, I am sponsoring the following exhibits, all of which are attached to this  
12 testimony:

13 Exhibit SLH-RJ1 Comparison of Company's, Staff's and RUCO's  
14 Recommended Revenue Requirements

15 Exhibit SLH-RJ2 Comparison of Company's, Staff's and RUCO's Original  
16 Cost Rate Base

17 Exhibit SLH-RJ3 Comparison of Company's, Staff's and RUCO's Adjusted  
18 Net Operating Income

19 Exhibit SLH-RJ4 Allocation of Phoenix Office (W/P SLH-R1 (Line 2))

20 Exhibit SLH-RJ5 Allocation of Meter Shop (W/P SLH-R1 (Line 3))

21 Exhibit SLH-RJ6 Response to Data Request No. RUCO 1.6 f)  
22 (CIAC/AIAC)

23 Exhibit SLH-RJ7 Copy of 2003 Department of Revenue Preliminary Notice  
24 of Value

25 Exhibit SLH-RJ8 Copy of 2003 Pinal County Tax Notice

26 Exhibit SLH-RJ9 Comparison of Net Plant



Exhibit SLH-RJ10 Apache Junction Purchased Water Expense Comparisons

**Q. PLEASE DESCRIBE EXHIBIT SLH-RJ1.**

A. Exhibit SLH-RJ1 is a nine-page exhibit titled "Computation of Increase in Gross Revenue Requirements." The exhibit provides a comparison of the Company's increase in gross revenue request in this proceeding to the positions of Staff and RUCO. A separate schedule is provided for each system in the Eastern Group. The format of the exhibit is comparable to Schedule A-1 of the Company's direct case schedules.

**Q. PLEASE DESCRIBE EXHIBIT SLH-RJ2.**

A. Exhibit SLH-RJ2 is a nine-page exhibit titled "Pro Forma Adjustments to Rate Base." There is a schedule for the entire Eastern Group and the eight operating systems showing the specific adjustments that make up the final rate base positions of the Company, Staff and RUCO. The format of the information summarized on Exhibit SLH-RJ2 is comparable to the Company's rebuttal Exhibit SLH-R2.

**Q. PLEASE DESCRIBE EXHIBIT SLH-RJ3.**

A. Exhibit SLH-RJ3 is a nine-page exhibit titled "Pro Forma Operating Income Statements". This exhibit, like Exhibit SLH-RJ2, consists of a set of schedules setting forth the detailed adjustments making up the final adjusted operating income positions of the Company, Staff and RUCO. A separate schedule is provided for each system in the Eastern Group. The format of the exhibit is comparable to Schedule C-1 of the Company's direct case schedules.

**III. RATE BASE**

**A. Plant In Service**

**Q. DID STAFF ACCEPT THE COMPANY'S ASSERTION THAT THE PHOENIX OFFICE AND METER SHOP TEST YEAR PLANT IN SERVICE BALANCES WERE INADVERTANTLY REMOVED FROM**

1           **RATE BASE BY STAFF?**

2       A.    Yes. Staff accepts the Company's assertion that an adjustment is necessary to  
3           correct Staff's elimination of test year plant for the Phoenix Office and Meter  
4           Shop. *See* Surrebuttal Testimony of Ronald E. Ludders ("Ludders Surrebuttal") at  
5           2. However, Staff has now revised the adjustment the Company identified as  
6           necessary to correct Staff's error.

7       **Q.   HAS THE COMPANY REVIEWED THE CALCULATION OF THE**  
8       **STAFF'S PROPOSED ADJUSTMENT?**

9       A.    Yes. Unfortunately, it appears that the Company's attempt to provide a simple  
10           adjustment to add back test year plant that Staff inadvertently eliminated has not  
11           been understood. In its direct filing, Staff included only its recommended level of  
12           post test year plant for the Phoenix Office and Meter Shop inadvertently  
13           eliminating the allocation of the Phoenix Office and Meter Shop test year plant. In  
14           its rebuttal filing, the Company computed the necessary adjustment to test year  
15           plant to reinstate the Phoenix Office and Meter Shop plant in rate base to be  
16           \$1,615,233. *See* Hubbard Rebuttal at 5. The adjustment reflected the Company's  
17           removal of \$125,565 of construction work in progress that was in the Company's  
18           original request for test year plant for the Phoenix Office.

19       **Q.   HAVE YOU PREPARED A SCHEDULE TO PROVIDE AN APPLES TO**  
20       **APPLES COMPARISON AND CALCULATES THE RESULTING**  
21       **UNDERSTATEMENT THAT EXISTS?**

22       A.    Yes. Exhibit SLH-RJ9 itemizes the components included in the Company's  
23           rebuttal recommendations for net plant with corresponding amounts included in the  
24           Staff's surrebuttal calculations.

25       **Q.   PLEASE EXPLAIN THE PURPOSE OF EXHIBIT SLH-RJ9.**

26       A.    Exhibit SLH-RJ9 is intended to provide the trier of facts in this proceeding with a

1 comparison of the Company's and Staff's proposed plant and to provide reasonable  
2 starting points if adjustments to either the Company's or Staff's proposals are  
3 recommended. As can be seen by the exhibit, the Company and Staff agree on the  
4 amount of Gross Plant In Service, i.e. total Eastern Group system plant before  
5 allocation of the Phoenix office or meter shop. However, there is a difference of  
6 \$333,483 between the Company and Staff regarding the net Phoenix office and  
7 meter shop allocation. The difference is primarily in the proper amount of test year  
8 plant as shown on line 4 of the exhibit. The Company's gross plant of \$84,514,771  
9 on line 19 is comparable to the Staff's \$84,181,288, an understatement by Staff of  
10 \$333,483. The exhibit also shows that the Company's proposed accumulated  
11 depreciation balance of \$18,157,534 on line 28 is comparable to the Staff's  
12 \$19,859,537.

13 **B. Accumulated Depreciation**

14 **Q. IN ITS SURREBUTTAL TESTIMONY, DID STAFF RESPOND TO ANY**  
15 **OF THE COMPANY'S DISAGREEMENTS PERTAINING TO THE**  
16 **METHODOLOGY USED BY STAFF TO CALCULATE ITS PROPOSED**  
17 **ACCUMULATED DEPRECIATION BALANCE?**

18 **A.** Partially. In the Company's rebuttal testimony, the Company questioned Staff's  
19 imputation of an additional year of depreciation expense on the adjusted test year  
20 plant, as well as Staff's failure to reflect the effect of using the half-year  
21 convention as it applies to plant retirements in calculating its proposed  
22 accumulated depreciation balance for the twelve years since 1991. The Staff  
23 adjusted its calculation of the half-year convention in its surrebuttal calculations,  
24 but the Staff did not change its imputation of an additional year of depreciation on  
25 all adjusted test year plant or provide any rationale for doing so. Imputing an  
26 additional year of depreciation to further reduce the Company's investment upon

1 which its revenue requirement will be determined as Staff proposes inhibits the  
2 Company's ability to earn a fair rate of return on its historical adjusted test year  
3 rate base. As such, Staff's recommended accumulated depreciation balance should  
4 not be relied upon.

5 **C. Working Capital Allowance**

6 **Q. DOES THE COMPANY AGREE WITH THE STAFF'S REVISED**  
7 **POSITION CONCERNING THE PROPER LAG FACTOR FOR**  
8 **PROPERTY TAXES?**

9 A. No, and we maintain the position set forth in the Company's rebuttal filing. *See* Hubbard  
10 Rebuttal at 9. Staff is mistakenly measuring the lag between the valuation date and the  
11 payment date. The lead/lag method of computing the cash working capital component of  
12 rate base requires a calculation of the lead days (prepayments) or lag days (accruals) that  
13 exist between the time an expense is **recorded** and the **payment** of such expense.  
14 Although, the Company does not take issue with the January 7, 1997 Arizona Department  
15 of Revenue ("DOR") memo (Staff Surrebuttal Exhibit REL-2), which, I note, existed at  
16 the time when the Northern Group's rate case was processed, it does not affect the  
17 computation of the lag days for working capital purposes. As discussed in the Company's  
18 rebuttal, the Staff used a 212 lag day factor in calculating the cash working capital  
19 component related to property taxes in the Northern Group's rate case which was adopted  
20 by the Commission. *See* Hubbard at 9. Staff, in this case, relies on the timing of the  
21 valuation versus the recording and payment of the tax expense to determine its property  
22 tax lag days. The tax year and the associated payment dates are clearly set forth in the  
23 DOR memo attached to Mr. Ludders' testimony as Exhibit REL-2. Upon careful  
24 examination of that memo referring to the column labeled "New Calendar", for tax year  
25 1999, the due date for the first half of taxes was October 1, 1999. The due date for the  
26 second half of taxes was March 1, 2000. The valuation date of January 1, 1998 had

1 nothing to do with the timing of the liability to the property owner or the timing of the  
2 payment of property taxes. The 2003 valuation notice provided to Arizona Water by DOR  
3 attached as Exhibit SLH-RJ7 confirms the Company's use of a 212 lag day factor in its  
4 cash working capital calculation for property taxes. The 2003 valuation notice explicitly  
5 states that "The valuation date for the above value is: January 1, 2002. However, the  
6 value will not be used for property tax purposes until tax year 2003. Taxes will be due as  
7 follows: First half due: October 1, 2003, Second half due: March 1, 2004."

8 The property tax bill for the year is computed by the counties and cities, which  
9 then send the Company a tax notice around August of the property tax year payable in two  
10 increments. (See Exhibit SLH-RJ8, copy of the 2003 Pinal County tax notice for tax year  
11 2003). One half of the bill (**recorded** by AWC during the first six months of the year) is  
12 **payable** November 3<sup>rd</sup> (2003 in this example) and the remaining half of the bill (**recorded**  
13 by AWC during the last six months of the year) is **payable** May 3<sup>rd</sup> of the subsequent  
14 year (2004 for the 2003 tax bill and tax year). Therefore, the current year's property tax  
15 liability is **recorded** from January to December with **payments** in November of the  
16 current year and May of the subsequent year, resulting in an extended lag in the payment  
17 of property taxes but **only** a 212 day lag for working capital purposes. The billing and  
18 payment requirements by the counties and cities assessing property taxes have not been  
19 changed based upon the valuation date notice relied upon by the Staff in its calculation of  
20 the lag days.

21 **Q. DOES STAFF CONTINUE TO ASSERT THAT THE COMPANY**  
22 **INCLUDED DEPRECIATION EXPENSE AND DEFERRED TAXES IN**  
23 **THE CALCULATION OF EXPENSE LAG DAYS?**

24 **A.** No, instead, Staff's surrebuttal testimony asserts that the Company "did not remove  
25 [depreciation expense and deferred taxes ] from its calculation of revenue days."  
26 Ludders Surrebuttal at 4.

1 Q. WHAT IS THE COMPANY'S RESPONSE TO THIS NEW POSITION?

2 A. To compute its working capital requirements, the Company computed revenue  
3 days based on the amount of revenues billed to its customers adjusted for the pro  
4 forma adjustments that affect revenues. The lag in the collection of adjusted test  
5 year revenues was determined for each system in the Eastern Group and used in  
6 computing the revenue lag to determine the working capital requirement. When  
7 the lag in the collection of revenues is greater than the lag for the payment of  
8 expenses, working capital is provided by investors and that amount is added to rate  
9 base.

10 E. Deferred Central Arizona Project Charges

11 Q. DO YOU AGREE WITH MR. LUDDERS THAT GENERALLY  
12 ACCEPTED ACCOUNTING PRINCIPLES SUPPORT STAFF'S  
13 RECOMMENDED 44-YEAR AMORTIZATION PERIOD FOR  
14 RECOVERY OF DEFERRED CENTRAL ARIZONA PROJECT  
15 CHARGES?

16 A. Mr. Ludders is only partially correct. The deferral of Central Arizona Project  
17 ("CAP") charges is allowable under Generally Accepted Accounting Principles  
18 ("GAAP") for regulated entities because of Financial Accounting Standards  
19 Board's ("FASB") Statement of Financial Accounting Standards ("SFAS") No. 71,  
20 "Accounting for the Effects of Certain Types of Regulation". Generally, this  
21 statement identifies when the recording of regulatory assets is appropriate which is  
22 a departure from GAAP for unregulated entities. Regulatory assets, such as the  
23 deferred CAP M&I charges, allow regulators to balance the financial needs of the  
24 utility with the need to prevent sharp increases in rates.

25 Under SFAS #71, instead of recording the full cost as an expense in the  
26 same period the cost is incurred, the regulated utility capitalizes the future

1 recoverable amount. That asset is then amortized over the period that the costs are  
2 allowed in rates by the regulator. The Commission is not restricted to or limited to  
3 an amortization period based upon an "estimated benefit period" that a non-  
4 regulated entity would be required to use. As explained in the Company's rebuttal  
5 testimony, the basis of Staff's recommended amortization period is that the  
6 deferred CAP M&I charges are an asset with some estimated future benefit period.  
7 *See Hubbard Rebuttal at 12.* The Company, however, asserts that M&I charges  
8 are more accurately characterized as a lease payment for the use of the Central  
9 Arizona Project canal system for the annual delivery of Colorado River water for  
10 the Apache Junction system under the CAP contract. *Id.* at 12. The Commission  
11 authorized the deferral of the M&I charges and an allowance for funds used during  
12 construction until such time as AWC's CAP allocation was being fully utilized.  
13 (Decision 58120, December 23, 1992) Arizona Water has used a portion of its  
14 annual allocation for potable consumption since prior to entry of Decision 58120  
15 without recovery of the CAP M&I charges.

16 **Q. IS THE THREE-YEAR AMORTIZATION PERIOD PROPOSED BY THE**  
17 **COMPANY CONSISTENT WITH GAAP?**

18 A. Yes. As discussed above, the recovery period for a regulatory asset such as the  
19 deferred CAP M&I charges, is determined by the regulator's inclusion of the  
20 deferred expenses in the Company's rates. The subjective nature of the recovery  
21 period is the reason regulatory bodies generally strive for some consistency in the  
22 treatment of similar expenditures between utilities they regulate.

23 **Q. HOW HAS THIS COMMISSION ADDRESSED THE RECOVERY OF**  
24 **DEFERRED CAP M&I CHARGES FOR OTHER WATER UTILITIES**  
25 **UTILIZING THEIR ALLOCATIONS?**

26 A. As discussed thoroughly in my rebuttal testimony at pages 12-13, the Commission

1 addressed the recovery of deferred CAP M&I charges for Sun City Water  
2 Company and Sun City West Utilities Company, now operational districts of  
3 Arizona-American Water Company in Decision No. 62293 (February 1, 2000). In  
4 that case, following a determination that the CAP water was "used and useful", the  
5 deferred CAP charges were amortized over a 5-year amortization period. Staff  
6 ignores this aspect of my testimony and I cannot see how they can reconcile the  
7 inconsistent treatment they propose for AWC.

8 **III. NET OPERATING INCOME**

9 **A. Revenue Annualization**

10 **Q. DID STAFF ACCEPT THE COMPANY'S RATIONALE FOR ITS USE OF**  
11 **THE AVERAGE REVENUE PER CUSTOMER BASED SOLELY ON THE**  
12 **5/8-INCH METER SIZE FOR PURPOSES OF COMPUTING ITS**  
13 **REVENUE ANNUALIZATION?**

14 **A.** No. But the Staff does argue that a mismatch results from the use of total expenses  
15 rather than just the expenses for the 5/8-inch meter group. The Company does  
16 concede that its calculation of the expense annualization applies the cost per gallon  
17 of applicable expenses to the average gallons sold per customer for all meter sizes  
18 versus just the 5/8-inch meter size. Therefore, an adjustment to the expense  
19 annualization previously reflected in the Company's direct case presentation to  
20 reflect only expenses associated with the 5/8-inch meter size is reflected in the  
21 Company's rejoinder position on the attached Exhibit SLH-RJ3. The adjustments  
22 affect the source of supply expenses, pumping costs, and water treatment. The  
23 effect of this adjustment on the Eastern Group's operating income is a decrease in  
24 expenses of \$25,967 less the effect of income taxes.

25 The Company maintains its position that the Staff's revenue annualization is  
26 incorrect because it overstates revenues by at least \$94,080 for the Eastern Group,



1 but acknowledges that the Company's expense annualization is overstated by  
2 \$25,967 less applicable income taxes and has reflected that adjustment in its final  
3 rejoinder position. *See* Hubbard Rebuttal at page 17.

4 **B. Purchased Power Adjustment Mechanism**

5 **Q. IS THE COMPANY PERSUADED BY THE STAFF'S ADDITIONAL**  
6 **TESTIMONY REGARDING ELIMINATION OF THE PPAM?**

7 A. No. Why would the Commission reject a mechanism designed to recover costs,  
8 like purchased power, that are outside of the Company's control when doing so  
9 either threatens the Company's ability to earn its authorized rate of return or causes  
10 customers to pay more than the cost of service? Staff's position is especially  
11 problematic in times when the electric power market is in a transition from a fully  
12 regulated environment to a market-based deregulated environment. I should think  
13 it obvious that a mechanism that both shields AWC from unanticipated cost  
14 increases and passes through to customers unanticipated decreases in the costs of  
15 electric power is fair and equitable. Therefore, the Company's PPAM should be  
16 retained.

17 **C. Purchased Water Adjustment Mechanism**

18 **Q. STAFF'S SURREBUTTAL TESTIMONY REPEATS ITS**  
19 **RECOMMENDATION TO ELIMINATE THE COMPANY'S PURCHASED**  
20 **WATER ADJUSTOR MECHANISM FOR SAN MANUEL. WHAT IS THE**  
21 **COMPANY'S RESPONSE TO STAFF'S ARGUMENT THAT THE**  
22 **PURCHASED WATER ADJUSTMENT MECHANISM TRANSFERS THE**  
23 **RISK OF PROVIDING WATER TO RATEPAYERS?**

24 A. The risk that a shareholder takes is the risk that earnings will not be sufficient to  
25 pay dividends and provide a reasonable return on the shareholder's investment.  
26 The cost of purchasing water is not the only cost of providing reliable water

1 service in the San Manuel system, as Staff implies. The Company has investment  
2 in transmission and distribution facilities (\$825,000 - adjusted TY 2001) and  
3 incurs expenses (\$360,000 O&M for 2001) to provide water service to its San  
4 Manuel customers. The PWAM allows the Company a reasonable opportunity to  
5 earn its authorized return on its investment in the San Manuel system because the  
6 changes in the cost of one component of providing water are recovered without the  
7 delay and expense of a general rate proceeding, while at the same time, the  
8 PWAM assures that customers bear no more than the actual cost of purchased  
9 water. With the Company's pro forma expense adjustments, which reflect the  
10 latest rate increase to \$1.12 per thousand gallons, purchased water constitutes 41%  
11 of the San Manuel system's O&M expenses and is highly volatile. The last two  
12 increases by BHP increased the cost of purchased water 96% as discussed in the  
13 Company's rebuttal testimony. *See* Hubbard Rebuttal at 20.

14 **D. Central Arizona Project Cost Amortization**

15 **Q. STAFF REJECTS THE COMPANY'S ASSERTION THAT STAFF'S**  
16 **RECOMMENDED PURCHASED WATER EXPENSE FOR APACHE**  
17 **JUNCTION IS UNDERSTATED BY \$31,604 AND FURTHER REVISES ITS**  
18 **CAP PURCHASED WATER EXPENSE RECOMMENDATION. WHAT IS**  
19 **THE COMPANY'S RESPONSE TO THESE CHANGES?**

20 **A.** The table below summarizes the Company's request for purchased water expense  
21 for Apache Junction and the Staff's surrebuttal recommendation regarding the same  
22 also set forth on Exhibit SLH-RJ10.  
23  
24  
25  
26

		Company	Staff
1			
2	Purchased Water Expense	\$797,336	\$797,336
3	Pro Forma Adjustments	<u>166,225</u>	<u>168,353</u>
4	Subtotal	\$963,561	965,689
5	Annualize Test Year End Customers	<u>19,233</u>	<u>31,584</u>
6	Total Purchased Water Expense	<u>\$982,794</u>	<u>\$997,273</u>

7 In its surrebuttal testimony, Staff is recommending \$965,689 for purchased  
8 water expense for Apache Junction. See Ludders Surrebuttal at 9. The effect of  
9 this revised recommendation is an elimination of the adjustment to annualize test  
10 year end customers. The Company opposes Staff's adjustment to eliminate the  
11 Company's pro forma adjustment to annualize purchased water expense because  
12 this would create a mismatch in revenues and expenses. Staff's original  
13 recommendation to annualize the expense is an increase in the purchased water  
14 expense of \$31,584 and, when added to Staff's revised purchased water expense  
15 results in a total purchased water expense of \$997,273 (\$965,689 + \$31,584).

16 **Q. PLEASE EXPLAIN THE DIFFERENCE IN THE COMPANY'S AND**  
17 **STAFF'S PROPOSED EXPENSE ANNUALIZATION.**

18 A. For consistency with the Company's rejoinder testimony, the expense annualization  
19 for purchased water of \$19,233 reflects the adjustment discussed at pages 11-12 to  
20 compute the pro forma adjustment using costs associated with the 5/8-inch meter  
21 size only.

22 **Q. FOR THE APACHE JUNCTION SYSTEM, STAFF IS RECOMMENDING**  
23 **\$965,689 OF PURCHASED WATER EXPENSE. IS THIS AMOUNT**  
24 **PROPERLY REFLECTED IN THE STAFF'S CALCULATION OF ITS NET**  
25 **OPERATING INCOME?**

26 A. No. On Staff's work paper detailing its recommended Adjusted Operating Income

1 of \$2,145,383, the purchased water expense included in the calculation of the net  
2 income is \$752,219 while in Staff's surrebuttal testimony, the recommended  
3 purchased water expense is \$965,689, a difference of \$213,470. See Ludders  
4 Surrebuttal at 9. The effect of this apparent error on the Apache Junction system is  
5 an overstatement of income by Staff of \$131,073. (\$213,470 net of income taxes of  
6 \$82,397).

7 **E. Water Treatment Expenses**

8 **Q. YOUR REBUTTAL TESTIMONY AT PAGE 23 ACCEPTS STAFF'S**  
9 **RECOMMENDED LEVEL OF WATER TESTING EXPENSES. HAS THE**  
10 **COMPANY INCORPORATED THE STAFF'S PROPOSED WATER**  
11 **TESTING EXPENSE INTO ITS REJOINDER EXHIBITS?**

12 A. Yes. The Company accepts the Staff's water testing expenses, as well as the  
13 remainder of Staff's proposed water treatment expenses. The effect of accepting  
14 Staff's proposed water treatment expenses is reflected on line 12 of Exhibit SLH-  
15 RJ3 in the column labeled Company-Rebuttal & Rejoinder Adjustments. The  
16 difference in the Company's water treatment expenses of \$358,062 and the Staff's  
17 water treatment expenses of \$360,946 is due to the revision of the Company's  
18 expense annualization adjustment discussed on pages 11 and 12.

19 **F. Rate Case Expense**

20 **Q. HOW DOES AWC RESPOND TO STAFF'S OPPOSITION TO THE**  
21 **INCLUSION OF LEGAL EXPENSES REGARDING THE ARSENIC COST**  
22 **RECOVERY MECHANISM PROCEEDINGS IN THE RATE CASE**  
23 **EXPENSE FOR THIS EASTERN GROUP RATE CASE?**

24 A. The Arsenic Cost Recovery Mechanism ("ACRM") proceeding, although it arose  
25 as Phase Two of the Company's Northern Group rate case, has evolved into a  
26 procedure that will, with minor modifications, be applied to the Eastern Group

1 systems as well. For that reason, AWC asserts that Northern Group customers  
2 should not bear the full impact of the costs to obtain an ACRM and that \$71,003 of  
3 the total \$100,579 incurred through July 2003 by AWC in Phase Two of the  
4 Northern Group proceedings should be allocated between the Eastern Group  
5 systems that will require arsenic treatment facilities. A 3-factor allocation of the  
6 \$71,003 based upon the systems that will benefit from the ACRM is recommended.  
7 For purposes of this proceeding, the Company proposes to allocate \$56,770 of the  
8 ACRM legal costs to Apache Junction, \$7,225 to Superior and \$7,008 to San  
9 Manuel. Other allocation methodologies were analyzed with similar results. The  
10 ACRM legal costs are in addition to the rate case expenses previously requested in  
11 this proceeding of \$257,550. The Company is requesting a three-year amortization  
12 for the recovery of those rate case expenses or \$85,850 per year on a total Eastern  
13 Group basis. The Company is requesting the same three-year amortization period  
14 for the ACRM legal costs. The Company has already provided an update to its  
15 proposed rate case expenses in response to discovery requests and will provide an  
16 additional update on September 15, 2003. At that time a revised allocation of rate  
17 case expenses will be incorporated into the Company's request in this proceeding.

18 **G. Additional CIAC Amortization**

19 **Q. STAFF ALSO OPPOSES THE CALCULATION OF A COMPOSITE RATE**  
20 **FOR PURPOSES OF AMORTIZING CONTRIBUTIONS IN AID OF**  
21 **CONSTRUCTION ("CIAC") BASED UPON THE PLANT ACCOUNTS**  
22 **AFFECTED BY CONTRIBUTIONS. WHAT IS THE COMPANY'S**  
23 **RESPONSE TO STAFF'S ALLEGATION, IN ITS SURREBUTTAL**  
24 **TESTIMONY, THAT THIS SUBJECT SHOULD HAVE BEEN PROPOSED**  
25 **IN THE COMPANY'S ORIGINAL FILING?**

26 **A. Although Staff questions why the Company did not raise this change in**

1 amortization methodology when it filed the application (*See* Ludders Surrebuttal at  
2 11), the change in methodology is necessitated by the change in depreciation  
3 methodology Staff is recommending and it is wrong for Staff to preclude the  
4 Company from addressing the issue.

5 In its last two rate cases, the Company used a composite depreciation  
6 methodology for computing depreciation of its plant assets as well as amortizing  
7 CIAC. In Decision No. 64282 (December 28, 2001), the Commission adopted  
8 Staff's recommendation to require the Company to use component depreciation  
9 rates in its next rate case filing. As a result of that decision, the Company filed pro  
10 forma adjustments to its test year depreciation expense to convert its depreciation  
11 expense calculation to recognize the effect of using a component methodology to  
12 depreciate assets. Accordingly, this rate proceeding is the appropriate forum to  
13 establish the appropriate rate to amortize CIAC for Arizona Water. The effect on  
14 the Company's rate base and income statement is not material (less than \$30,000  
15 on an Eastern Group basis) and does not present an obstacle, irrespective of  
16 whether it was raised by the Company in the application or in rebuttal to Staff's  
17 adjustment to the amortization expense. The important thing is for the Commission  
18 to adopt the correct methodology.

19 **IV. RESPONSE TO SURREBUTTAL TESTIMONY OF RUCO**

20 **A. Test Year Adjustments**

21 **Q. RUCO ALLEGES THAT THE COMPANY HAS OVERSTATED ITS**  
22 **OVERALL LEVEL OF ADJUSTED TEST YEAR EXPENSES. IS THERE**  
23 **ANY VALIDITY TO THIS ALLEGATION?**

24 **A.** No. A comparison of the expense levels recommended by RUCO, including minor  
25 adjustments set forth in its surrebuttal to the Company's requested level of  
26 expenses, illustrates that there is no validity to RUCO's allegation. For example,

1 for the Apache Junction system, the Company is requesting total operation and  
2 maintenance expenses of approximately \$4.2 million compared to RUCO's  
3 recommendation of \$4.4 million. Likewise, the Company is requesting  
4 approximately \$7.1 million in operating expenses versus the \$7.5 million that  
5 RUCO is recommending.

6 **Q. RUCO SPECIFICALLY TARGETS THE COMPANY'S PROPOSED**  
7 **DEPRECIATION AND AMORTIZATION EXPENSE AS POSSIBLY**  
8 **BEING OVERSTATED. HAS THE COMPANY PERFORMED A SIMILAR**  
9 **COMPARISON?**

10 A. Yes. On a total Eastern Group basis, the difference between the requested  
11 depreciation and amortization expense of the Company and the comparable  
12 expenses recommended by RUCO is approximately \$250,000. Of course, one  
13 must keep in mind that the Company is requesting a three-year amortization of its  
14 deferred CAP M&I charges of approximately \$700,000, while RUCO is  
15 recommending a recovery period more than three times as long, translating into  
16 less than one-third of the amortization expense. Another factor contributing to the  
17 difference is RUCO's erroneous use of a composite depreciation rate of 2.59%,  
18 whereas, the Company utilized component depreciation rates mandated by the  
19 Commission in Decision No. 64282 (December 28, 2001).

20 **Q. IN ITS SURREBUTTAL TESTIMONY, RUCO STATES THAT THE**  
21 **COMPANY FAILED TO PROPERLY MATCH THE POST TEST YEAR**  
22 **ADDITIONS THAT WERE PROVIDED THROUGH CONTRIBUTIONS IN**  
23 **AID OF CONSTRUCTION. IS THIS TRUE?**

24 A. No, it is absolutely not true. The Company did **not** include any post test year  
25 additions that constitute contributions or advances in aid of construction and as  
26 such, there is no need to provide an offset for contributions in aid of construction.

1 In Response to Data Request No. RUCO 1.6 f), attached as Exhibit SLH-RJ6, the  
2 Company responded to RUCO's request for information regarding post test year  
3 plant additions included in the Company's rate base adjustments funded by CIAC  
4 and AIAC. That response clearly states that none of the projects included in the  
5 Company's post test year adjustments to rate base was funded by either CIAC or  
6 AIAC.

7 **Q. RUCO ALSO CONTENDS NO ADJUSTMENT TO THE TEST YEAR**  
8 **DEPRECIATION EXPENSE WAS MADE EVEN THOUGH A NUMBER**  
9 **OF REVENUE NEUTRAL ADDITIONS DID NOT GO INTO SERVICE BY**  
10 **THE DECEMBER 31, 2002 CUT-OFF DATE. IS THAT CORRECT?**

11 A. Yes. In the Company's rebuttal presentation, the primary focus was on rate base.  
12 AWC provided a revised schedule setting forth its actual revenue-neutral post test  
13 year plant additions with an adjustment to accumulated depreciation to reflect the  
14 revised depreciation expense resulting from the change in post test year plant  
15 additions between AWC's direct and rebuttal filings. Work papers setting forth the  
16 calculation of the revised depreciation expense were provided to both Staff and  
17 RUCO and the Company has provided a revised operating income that incorporates  
18 the revised depreciation expense in this rejoinder testimony.

19 **Q. MS. HUBBARD, IN ITS SURREBUTTAL TESTIMONY, RUCO'S**  
20 **WITNESS IDENTIFIES THREE AREAS OF CONCERN WITH THE**  
21 **COMPANY'S REBUTTAL TESTIMONY. HOW DOES AWC RESPOND?**

22 A. The first area of concern that RUCO discusses relates to RUCO's misconception  
23 that the Company included post test year plant additions funded by CIAC and  
24 AIAC. RUCO opines that for proper matching, post test year plant additions  
25 funded by CIAC and AIAC should be offset by the associated CIAC and AIAC.  
26 But, AWC did not include any post test year plant additions that were funded by



1 CIAC or AIAC, as discussed above. Therefore, an adjustment is not necessary.

2 The second area of concern for RUCO relates to the \$126,565 of  
3 construction work in progress inadvertently included in the Company's direct  
4 presentation related to the Phoenix Office test year plant. In the Company's  
5 rebuttal presentation, the construction work in progress was removed and is also  
6 removed in the Company's final rejoinder calculation of rate base. Had the  
7 Company not properly removed the amount, there would be a double counting of  
8 post test year plant, but since the adjustment was made in the rebuttal rate base and  
9 also the rejoinder rate base, no further adjustment is necessary.

10 The third area of concern involves the appropriate number of lag days with  
11 respect to the payment of federal and state income taxes. The Company believes  
12 RUCO is using the wrong number of lag days. The lead/lag method of computing  
13 the cash working capital component of rate base requires a calculation of the lead  
14 days (prepayments) or lag days (accruals) that exist between the time an expense is  
15 **recorded** and the **payment** of such expenses. For purposes of federal income  
16 taxes, the Company records the annual income tax liability on a monthly basis.  
17 Payments of the accrued liability are made quarterly. The Company's calculation  
18 of the lag associated with the payment of federal income taxes recognizes the lag  
19 associated with the quarterly payment of ninety percent of the liability as well as  
20 the lag associated with the payment of the remaining ten percent of the liability  
21 made in March of the subsequent year. RUCO's calculation of its 61.95 days is  
22 based upon the erroneous assumption that payments are made annually. As such,  
23 the Company's cash working capital allowance is not overstated.

24 **B. Deferred CAP Charges**

25 **Q. RUCO TESTIFIES IN ITS DIRECT AND SURREBUTTAL FILINGS THAT**  
26 **AWC'S RECOVERY OF DEFERRED CAP CHARGES SHOULD BE**

1           **LIMITED TO RUCO'S RECOMMENDED FIGURE OF \$645,207. IS THE**  
2           **COMPANY REQUESTING RECOVERY OF DEFERRED CAP CHARGES**  
3           **IN EXCESS OF THIS AMOUNT?**

4       A.    No. In this proceeding, the Company is requesting the recovery of \$645,207 of  
5           actual deferred CAP M&I charges incurred subsequent to 1990 through December  
6           31, 2002. The Company interpreted RUCO's recommendation to limit the  
7           Company's recovery of deferred CAP charges to no more than \$645,207 as  
8           precluding the Company from requesting in a future rate proceeding recovery of  
9           additional CAP M&I charges that have been incurred and deferred after December  
10          31, 2002 through the period when a decision in this proceeding is issued.

11       **Q.    IS THE COMPANY ATTEMPTING TO RECOVER DEFERRED CAP M&I**  
12       **CHARGES INCURRED AFTER DECEMBER 31, 2002 IN THIS**  
13       **PROCEEDING?**

14       A.    No, but the Company should not be prevented from seeking recovery of those  
15           expenses in a future rate proceeding.

16       **Q.    DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

17       A.    Yes, it does, except that I wish to note that my silence on any issue raised or  
18           recommendation made by Staff or RUCO in the surrebuttal testimony should not  
19           be taken as the Company's acceptance of such issue or recommendation.

20  
21  
22  
23       C:\Documents and Settings\jshapiro\Local Settings\Temporary Internet Files\OLK3\SLH\_D3\_091003.doc

# EXHIBITS

Schedule A-1 Comparisons

**ARIZONA WATER COMPANY  
COMPUTATION OF INCREASE IN  
GROSS REVENUE REQUIREMENTS  
TEST YEAR 2001 EASTERN GROUP**

Line No.	Description	Company		Staff		RUCO	
		Direct Testimony	Rejoinder Testimony	Direct Testimony	Surrebuttal Testimony	Direct Testimony	Surrebuttal Testimony
1.							
2.	Adjusted Operating Income	1,969,032	2,019,507	2,398,375	2,284,305 (a)	2,624,724	2,593,425
3.	Current Rate of Return	4.73%	5.18%	7.40%	6.76%	7.45%	7.36%
4.	Required Operating Income	4,576,537	4,251,314	2,775,643	2,895,184	3,059,572	3,059,654
5.	Required Rate of Return	11.00%	10.90%	8.566%	8.566%	8.68%	8.68%
6.	Operating Income Deficiency	2,607,505	2,231,807	377,268	610,879	434,848	466,229
7.	Gross Revenue Conversion Factor	1.63241	1.63195	1.63195	1.63195	Various	Various
8.	Increase in Gross Revenue	4,256,517	3,642,197	615,683	996,924	598,229	648,443

(a) - Includes (\$140,787) adjustment to reflect Staff's recommended Purchased Water expense for Apache Junction of \$965,689.

Schedule A-1 Comparisons

**RIZONA WATER COMPANY  
COMPUTATION OF INCREASE IN  
GROSS REVENUE REQUIREMENTS  
EST YEAR 2001 APACHE JUNCTION**

Line	Description	Company		Staff		RUCO	
		Direct Testimony	Rejoinder Testimony	Direct Testimony	Surrebuttal Testimony	Direct Testimony	Surrebuttal Testimony
1.	Adjusted Rate Base	24,207,016	21,722,321	18,346,065	19,071,140	19,792,392	19,793,353
2.	Adjusted Operating Income	1,862,934	1,885,563	2,123,886	2,004,596 (a)	2,106,210	2,099,279
3.	Current Rate of Return	7.70%	8.68%	11.58%	10.51%	10.64%	10.61%
4.	Required Operating Income	2,662,772	2,367,733	1,571,524	1,633,634	1,718,542	1,718,625
5.	Required Rate of Return	11.00%	10.90%	8.566%	8.566%	8.68%	8.68%
6.	Operating Income Deficiency	799,838	482,169	(552,362)	(370,962)	(387,668)	(380,654)
7.	Gross Revenue Conversion Factor	1.63241	1.63195	1.63195	1.63195	1.63245	1.63245
8.	Increase in Gross Revenue	1,305,663	786,877	(901,427)	(605,392)	(632,849)	(621,398)

(a) - Includes (\$140,787) adjustment to reflect Staff's recommended Purchased Water expense of \$965,689.

Schedule A-1 Comparisons

**ARIZONA WATER COMPANY  
COMPUTATION OF INCREASE IN  
GROSS REVENUE REQUIREMENTS  
TEST YEAR 2001 BISBEE**

Line No.	Description	Company		Staff		RUCO	
		Direct Testimony	Rejoinder Testimony	Direct Testimony	Surrebuttal Testimony	Direct Testimony	Surrebuttal Testimony
1.	Adjusted Rate Base	3,700,113	3,878,994	3,425,681	3,590,535	3,603,100	3,603,097
2.	Adjusted Operating Income	31,708	29,073	74,498	75,855	120,327	113,054
3.	Current Rate of Return	0.86%	0.75%	2.17%	2.11%	3.34%	3.14%
4.	Required Operating Income	407,012	422,810	293,444	307,565	312,851	312,851
5.	Required Rate of Return	11.00%	10.90%	8.566%	8.566%	8.68%	8.68%
6.	Operating Income Deficiency	375,304	393,738	218,946	231,710	192,524	199,797
7.	Gross Revenue Conversion Factor	1.63241	1.63195	1.63195	1.63195	1.63136	1.63136
8.	Increase in Gross Revenue	612,651	642,560	357,309	378,140	314,077	325,941

Schedule A-1 Comparisons

ARIZONA WATER COMPANY  
COMPUTATION OF INCREASE IN  
GROSS REVENUE REQUIREMENTS  
TEST YEAR 2001 SIERRA VISTA

Line No.	Description	Company		Staff		RUCO	
		Direct Testimony	Rejoinder Testimony	Direct Testimony	Surrebuttal Testimony	Direct Testimony	Surrebuttal Testimony
1.	Adjusted Rate Base	2,574,687	2,512,878	2,200,445	2,317,564	2,256,648	2,256,646
2.	Adjusted Operating Income	31,076	31,373	60,967	61,972	145,377	140,678
3.	Current Rate of Return	1.21%	1.25%	2.77%	2.67%	6.44%	6.23%
4.	Required Operating Income	283,216	273,904	188,490	198,523	195,941	195,941
5.	Required Rate of Return	11.00%	10.90%	8.566%	8.566%	8.66%	8.66%
6.	Operating Income Deficiency	252,140	242,531	127,523	136,551	50,564	55,263
7.	Gross Revenue Conversion Factor	1.63241	1.63195	1.63195	1.63195	1.55062	1.55062
8.	Increase in Gross Revenue	411,595	395,798	208,111	222,844	78,406	85,692

Schedule A-1 Comparisons

ARIZONA WATER COMPANY  
COMPUTATION OF INCREASE IN  
GROSS REVENUE REQUIREMENTS  
TEST YEAR 2001 MIAMI

Line No.	Description	Company		Staff		RUCO	
		Direct Testimony	Rejoinder Testimony	Direct Testimony	Surrebuttal Testimony	Direct Testimony	Surrebuttal Testimony
1.							
2.	Adjusted Operating Income	59,991	92,973	121,633	122,821	167,256	161,155
3.	Current Rate of Return	1.31%	2.06%	4.44%	4.21%	4.64%	4.48%
4.	Required Operating Income	502,722	491,330	234,761	249,964	312,658	312,658
5.	Required Rate of Return	11.00%	10.90%	8.566%	8.566%	8.68%	8.68%
6.	Operating Income Deficiency	442,731	398,358	113,128	127,143	145,402	151,503
7.	Gross Revenue Conversion Factor	1.63241	1.63195	1.63195	1.63195	1.63121	1.63121
8.	Increase in Gross Revenue	722,718	650,100	184,619	207,490	237,181	247,133



Schedule A-1 Comparisons

**ARIZONA WATER COMPANY  
COMPUTATION OF INCREASE IN  
GROSS REVENUE REQUIREMENTS  
TEST YEAR 2001 SAN MANUEL**

Line No.	Description	Company		Staff		RUCO	
		Direct Testimony	Rejoinder Testimony	Direct Testimony	Surrebuttal Testimony	Direct Testimony	Surrebuttal Testimony
1.	Adjusted Rate Base	793,993	759,504	641,450	699,272	746,978	746,995
2.	Adjusted Operating Income	(186,410)	(181,279)	(157,941)	(157,490)	(196,500)	(196,716)
3.	Current Rate of Return	-23.48%	-23.87%	-24.62%	-22.52%	-26.31%	-26.33%
4.	Required Operating Income	87,339	82,766	54,947	59,900	64,859	64,860
5.	Required Rate of Return	11.00%	10.90%	8.566%	8.566%	8.68%	8.66%
6.	Operating Income Deficiency	273,749	264,065	212,888	217,390	261,359	261,576
7.	Gross Revenue Conversion Factor	1.63241	1.63195	1.63195	1.63195	1.28036	1.28036
8.	Increase in Gross Revenue	446,871	430,940	347,422	354,769	334,633	334,912

Schedule A-1 Comparisons

**ARIZONA WATER COMPANY  
COMPUTATION OF INCREASE IN  
GROSS REVENUE REQUIREMENTS  
TEST YEAR 2001 ORACLE**

Line No.	Description	Company		Staff		RUCO	
		Direct Testimony	Rejoinder Testimony	Direct Testimony	Surrebuttal Testimony	Direct Testimony	Surrebuttal Testimony
1.	Adjusted Rate Base	2,819,400	2,706,211	2,415,268	2,495,716	2,513,635	2,513,634
2.	Adjusted Operating Income	167,200	158,185	159,659	160,336	233,730	230,836
3.	Current Rate of Return	5.93%	5.85%	6.61%	6.42%	9.30%	9.18%
4.	Required Operating Income	310,134	294,977	206,892	213,783	218,255	218,255
5.	Required Rate of Return	11.00%	10.90%	8.566%	8.566%	8.68%	8.68%
6.	Operating Income Deficiency	142,934	136,792	47,233	53,447	(15,475)	(12,581)
7.	Gross Revenue Conversion Factor	1.63241	1.63195	1.63195	1.63195	1.57244	1.57244
8.	Increase in Gross Revenue	233,327	223,238	77,082	87,223	(24,334)	(19,783)

Schedule A-1 Comparisons

**ARIZONA WATER COMPANY  
COMPUTATION OF INCREASE IN  
GROSS REVENUE REQUIREMENTS  
TEST YEAR 2001 WINKELMAN**

Line No.	Description	Company		Staff		RUCO	
		Direct Testimony	Rejoinder Testimony	Direct Testimony	Surrebuttal Testimony	Direct Testimony	Surrebuttal Testimony
1.	Adjusted Rate Base	265,899	269,330	232,924	242,504	252,071	252,049
2.	Adjusted Operating Income	9,437	8,419	9,576	9,629	7,933	7,381
3.	Current Rate of Return	3.55%	3.13%	4.11%	3.97%	3.15%	2.93%
4.	Required Operating Income	29,249	29,357	19,952	20,773	21,887	21,885
5.	Required Rate of Return	11.00%	10.90%	8.566%	8.566%	8.68%	8.68%
6.	Operating Income Deficiency	19,812	20,938	10,376	11,144	13,954	14,504
7.	Gross Revenue Conversion Factor	1.63241	1.63195	1.63195	1.63195	1.26755	1.26755
8.	Increase in Gross Revenue	32,341	34,169	16,934	18,186	17,887	18,385

Schedule A-1 Comparisons

ARIZONA WATER COMPANY  
COMPUTATION OF INCREASE IN  
GROSS REVENUE REQUIREMENTS  
TEST YEAR 2001 SUPERIOR

Line No.	Description	Company		Staff		RUCO	
		Direct Testimony	Rejoinder Testimony	Direct Testimony	Surrebuttal Testimony	Direct Testimony	Surrebuttal Testimony
1.	Adjusted Rate Base	2,673,576	2,646,023	2,400,573	2,463,731	2,471,297	2,471,296
2.	Adjusted Operating Income	(6,904)	(4,800)	6,097	6,586	40,391 (a)	37,758 (a)
3.	Current Rate of Return	-0.28%	-0.18%	0.25%	0.27%	1.63%	1.53%
4.	Required Operating Income	294,093	288,417	205,633	211,043	214,579	214,579
5.	Required Rate of Return	11.00%	10.90%	8.566%	8.566%	8.68%	8.68%
6.	Operating Income Deficiency	300,997	293,217	199,536	204,457	174,188	176,821
7.	Gross Revenue Conversion Factor	1.63241	1.63195	1.63195	1.63195	1.56973	1.56973
8.	Increase in Gross Revenue	491,351	478,515	325,633	333,664	273,428	277,561

(a) - RUCO's formula did not include the additional \$35 adjustment to Other Revenues that they proposed so income has been increased by \$35.

**ARIZONA WATER COMPANY  
PRO FORMA ADJUSTMENTS RATE BASE  
TEST YEAR 2001 EASTERN GROUP**

Line No.	Description	Company			Staff			RUCO				
		Actual	Pro Forma Present Adjustments	As Adjusted	Pro Forma Present Adjustments	As Adjusted	Surrebuttal Adjustments	As Adjusted	Surrebuttal Adjustments			
1.	Gross Plant in Service	79,801,452	6,468,871	86,270,323	(3,552,432)	82,717,891	0	82,717,891	(1,404,118)	84,866,205	(1)	84,866,204
2.	Phoenix Office Allocation	1,639,085	0	1,639,085	119,649	1,758,734	0	1,758,734	402,064	2,041,149	0	2,041,149
3.	Mater Shop Allocation	34,141	0	34,141	3,999	38,140	0	38,140	0	34,141	0	34,141
4.	Total Gross Plant in Service	81,474,678	6,468,871	87,943,549	(3,428,784)	84,514,765	0	84,514,765	(1,002,054)	86,941,495	(1)	86,941,494
5.	Less: Accumulated Depreciation	(18,068,863)	(252,877)	(18,321,740)	164,206	(18,157,534)	0	(18,157,534)	(19,835,625)	(19,859,546)	(1)	(19,759,491)
6.	Net Plant in Service	63,405,815	6,215,994	69,621,809	(3,264,578)	66,357,231	0	66,357,231	(2,438,804)	67,183,005	(2)	67,183,003
7.	Construction Work in Progress	1,114,579	0	1,114,579	0	0	0	0	0	0	0	0
8.	Total Net Plant	64,520,394	5,101,415	69,621,809	(3,264,578)	66,357,231	0	66,357,231	(2,438,804)	67,183,005	(2)	67,183,003
9.	Less: Customers' Advances for Construction Contributions in Aid of Construction	(18,335,026)	1,102,363	(17,232,663)	0	(17,232,663)	0	(17,232,663)	(1,594,539)	(18,827,202)	0	(18,827,202)
10.	Gross	(7,850,910)	0	(7,850,910)	0	(7,850,910)	0	(7,850,910)	(739,351)	(8,590,261)	0	(8,590,261)
11.	Accumulated Amortization	968,440	0	968,440	(28,945)	939,495	0	968,440	212,914	1,181,354	0	1,181,354
12.	Net Contributions in Aid of Construction	(25,217,496)	1,102,363	(24,115,133)	(28,945)	(24,144,078)	0	(24,115,133)	(2,120,976)	(26,236,109)	0	(26,236,109)
13.	Deferred Income Tax	(4,825,667)	0	(4,825,667)	0	(4,825,667)	0	(4,825,667)	(885,853)	(5,711,520)	0	(5,711,520)
14.	Deferred CAP (Net)	0	0	0	691,522	691,522	0	691,522	645,207	645,207	0	645,207
15.	Add: Total Working Capital Allowance	923,871	0	923,871	0	923,871	0	923,871	(867,462)	56,409	948	57,357
16.	Total Rate Base Components & Adjustments	35,401,102	6,203,778	41,604,880	(2,602,001)	39,002,879	0	39,002,879	(5,667,868)	35,936,992	946	35,937,936
17.												
18.												
19.												

Schedule B-2 Comparisons

**ARIZONA WATER COMPANY**  
**PRO FORMA ADJUSTMENTS RATE BASE**  
**TEST YEAR 2001 APACHE JUNCTION**

Line No.	Description	Company			Rejoinder			Staff			RUCO		
		Actual	Pro Forma Present Adjustments	As Adjusted	Adjustments	As Adjusted	As Adjusted	Pro Forma Present Adjustments	As Adjusted	As Adjusted	Adjustments	Pro Forma Present Adjustments	As Adjusted
1.	Gross Plant in Service	50,788,542	4,458,249	55,226,791	(3,412,585)	51,814,226	51,814,226	(3,412,585)	51,814,226	51,814,226	(1,438,204) (a)	53,788,587	53,788,587
2.	Phoenix Office Allocation	852,453		852,453	96,459	908,912	86,619	(765,834)	86,619	747,791	214,842 (b)	1,067,095	1,067,095
3.	Meter Shop Allocation	17,756		17,756	1,960	19,716	1,960	(15,796)	1,960	13,287		17,756	17,756
4.	Total Gross Plant in Service	51,638,751	4,458,249	56,097,000	(3,354,148)	52,742,854	51,902,805	(4,194,195)	51,902,805	52,575,304	(1,223,562)	54,873,438	54,873,438
5.	Less: Accumulated Depreciation	(8,681,694)	(110,011)	(8,791,705)	188,946	(8,592,759)	(9,882,252)	(1,100,547)	(9,882,252)	(9,912,253)	(1,102,379)	(9,894,084)	(9,894,085)
6.	Net Plant in Service	42,957,057	4,348,238	47,305,295	(3,155,200)	44,150,095	42,010,553	(5,294,742)	42,010,553	42,663,051	(2,325,941)	44,979,354	44,979,353
7.	Construction Work in Progress	1,107,018	(1,107,018)	0		0	0		0	0	0	0	0
8.	Total Net Plant	44,064,075	3,241,220	47,305,295	(3,155,200)	44,150,095	42,010,553	(5,294,742)	42,010,553	42,663,051	(2,325,941)	44,979,354	44,979,353
9.	Less: Customers' Advances for Construction	(16,543,636)	1,100,259	(15,443,377)		(15,443,377)	(15,443,377)	0	(15,443,377)	(15,443,377)	(1,264,007)	(16,707,384)	(16,707,384)
10.	Contributions in Aid of Construction												
11.	Gross	(6,228,486)		(6,228,486)		(6,228,486)	(6,228,486)	0	(6,228,486)	(6,228,486)	(688,894)	(6,897,380)	(6,897,380)
12.	Accumulated Amortization	713,806		713,806	(21,017)	692,789	713,806	0	713,806	713,806	169,980	883,786	883,786
13.	Net Contributions in Aid of Construction	(22,058,316)	1,100,259	(20,958,057)	(21,017)	(20,979,074)	(20,958,057)	0	(20,958,057)	(20,958,057)	(1,762,921)	(22,720,978)	(22,720,978)
14.	Deferred Income Tax	(2,699,309)		(2,699,309)		(2,699,309)	(2,699,309)	0	(2,699,309)	(2,699,309)	(409,446)	(3,108,755)	(3,108,755)
15.	Deferred CAP (Net)	0		0		0	684,785	684,785	684,785	671,404	645,207	645,207	645,207
16.	Add: Total Working Capital Allowance	559,087		559,087		559,087	(691,907)	(1,250,994)	(691,907)	(605,949)	(561,523)	(2,436)	(1,474)
17.	Total Rate Base Components & Adjustments	19,865,537	4,341,479	24,207,016	(2,484,695)	21,722,321	18,346,065	(5,860,951)	18,346,065	19,071,140	(4,414,624)	19,792,392	19,793,353

(a) - Adjustment includes Unamortized Cap (\$704,903) reclassified as separate line item in RUCO's presentation.

(b) - Represents RUCO's proposed adjustment for Phoenix Office and Meter Shop.

(c) - Reclassified from Gross Plant in Service for comparative purposes.

Schedule B-2 Comparisons

**ARIZONA WATER COMPANY**  
**PRO FORMA ADJUSTMENTS RATE BASE**  
**TEST YEAR 2001 BISBEE**

Line No.	Description	Company			Reolinder			Staff			RUCO		
		Actual	Pro Forma Present Adjustments	As Adjusted	Adjustments	As Adjusted	As Adjusted	Pro Forma Present Adjustments	As Adjusted	As Adjusted	Pro Forma Present Adjustments	As Adjusted	Surrebuttal Adjustments As Adjusted
1.	Gross Plant in Service	6,836,386	597,543	7,433,939	179,974	7,613,913	7,613,913	179,974	7,613,913	0	187,076	7,801,015	0
2.	Phoenix Office Allocation	189,951		189,951	12,560	202,511	202,511	(170,650)	166,630	0	47,638 (a)	237,589	0
3.	Meter Shop Allocation	3,956		3,956	436	4,392	4,392	(3,520)	2,960	0		3,956	0
4.	Total Gross Plant in Service	7,030,303	597,543	7,627,846	192,990	7,820,836	7,820,836	5,804	7,826,640	7,826,640	234,714	7,862,560	0
5.	Less: Accumulated Depreciation	(3,071,420)	(27,629)	(3,099,049)	(12,900)	(3,111,949)	(3,111,949)	(128,966)	(3,240,915)	(3,240,915)	(121,469)	(3,220,517)	0
6.	Net Plant in Service	3,958,883	569,914	4,528,797	180,090	4,708,887	4,708,887	(123,162)	4,585,725	4,585,725	113,246	4,642,043	0
7.	Construction Work in Progress	0	0	0	0	0	0	0	0	0	0	0	0
8.	Total Net Plant	3,958,883	569,914	4,528,797	180,090	4,708,887	4,708,887	(123,162)	4,585,725	4,585,725	113,246	4,642,043	0
9.	Less: Customers' Advances for Construction	(190,083)		(190,083)	0	(190,083)	(190,083)	0	(190,083)	0	(11,491)	(201,574)	0
10.	Contributions in Aid of Construction	(372,133)		(372,133)	0	(372,133)	(372,133)	0	(372,133)	0	(2,425)	(374,558)	0
11.	Gross	55,613		55,613	(1,209)	54,404	54,404	0	55,613	55,613	9,670	65,283	0
12.	Accumulated Amortization	(506,603)	0	(506,603)	(1,209)	(507,812)	(507,812)	0	(506,603)	(506,603)	(4,246)	(510,849)	0
13.	Net Contributions in Aid of Construction	(423,066)		(423,066)	0	(423,066)	(423,066)	0	(423,066)	0	(146,467)	(569,533)	0
14.	Deferred Income Tax	0	0	0	0	0	0	0	0	0	0	0	0
15.	Deferred CAP (Net)	100,985		100,985	0	100,985	100,985	(151,270)	(50,285)	(50,285)	(59,546)	41,439	(3)
16.	Add: Total Working Capital Allowance												
17.	Total Rate Base Components & Adjustments	3,130,199	569,914	3,700,113	178,881	3,878,994	3,878,994	(274,432)	3,425,681	3,590,535	(97,013)	3,603,100	(3)
													3,603,097

(a) - Represents RUCO's proposed adjustment for Phoenix Office and Meter Shop.

Schedule B-2 Comparisons

**ARIZONA WATER COMPANY**  
**PRO FORMA ADJUSTMENTS RATE BASE**  
**TEST YEAR 2001 SIERRA VISTA**

Line No.	Description	Company			Reimburse			Staff			RUCO		
		Actual	Pro Forma Present	As Adjusted	Adjustments	As Adjusted	As Adjusted	Pro Forma Present	As Adjusted	As Adjusted	Pro Forma Present	As Adjusted	As Adjusted
1.	Gross Plant in Service	5,121,802	160,557	5,282,359	(63,066)	5,219,293	(63,066)	5,219,293	0	5,219,293	155,384	5,437,743	0
2.	Phoenix Office Allocation	130,569		130,569	8,647	139,216	(117,302)	13,267	101,299	114,566	28,651 (a)	159,220	0
3.	Meter Shop Allocation	2,720		2,720	300	3,020	(2,420)	300	1,735	2,035		2,720	0
4.	Total Gross Plant in Service	5,255,091	160,557	5,415,648	(54,119)	5,361,529	(182,786)	5,232,860	103,034	5,335,894	184,035	5,599,683	0
5.	Less: Accumulated Depreciation	(1,381,211)	(25,889)	(1,406,900)	(3,645)	(1,410,545)	(92,722)	(1,499,622)	(3,046)	(1,502,668)	(39,723)	(1,446,623)	0
6.	Net Plant in Service	3,873,880	134,668	4,008,748	(57,764)	3,950,984	(275,510)	3,733,238	99,988	3,833,226	144,312	4,153,060	0
7.	Construction Work in Progress	2,104	(2,104)	0	0	0	0	0	0	0	0	0	0
8.	Total Net Plant	3,875,984	132,564	4,008,748	(57,764)	3,950,984	(275,510)	3,733,238	99,988	3,833,226	144,312	4,153,060	0
9.	Less: Customers' Advances for Construction	(569,715)	2,104	(567,611)	0	(567,611)	0	(567,611)	0	(567,611)	(337,114)	(924,725)	0
10.	Contributions in Aid of Construction	(699,448)		(699,448)	0	(699,448)	0	(699,448)	0	(699,448)	(42,631)	(742,079)	0
11.	Gross	113,980		113,980	(4,045)	109,935	0	113,980	0	113,980	19,668	132,648	0
12.	Accumulated Amortization	(1,175,183)	2,104	(1,173,079)	(4,045)	(1,177,124)	0	(1,173,079)	0	(1,173,079)	(361,077)	(1,534,156)	0
13.	Net Contributions in Aid of Construction	(331,421)		(331,421)	0	(331,421)	0	(331,421)	0	(331,421)	(49,050)	(380,471)	0
14.	Deferred Income Tax	0		0	0	0	0	0	0	0	0	0	0
15.	Deferred CAP (Net)	70,439		70,439	0	70,439	(98,732)	(28,293)	17,131	(11,162)	(52,224)	18,215	(2)
16.	Add: Total Working Capital Allowance				0								
17.	Total Rate Base Components & Adjustments	2,439,819	134,868	2,574,687	(61,809)	2,512,878	(374,242)	2,200,445	117,119	2,317,564	(318,039)	2,256,646	(2)

(a) - Represents RUCO's proposed adjustment for Phoenix Office and Meter Shop.



Schedule B-2 Comparisons

**ARIZONA WATER COMPANY**  
**PRO FORMA ADJUSTMENT'S RATE BASE**  
**TEST YEAR 2001 MIAMI**

Line No.	Description	Company			Reincider			Staff			RUCO		
		Actual	Pro Forma Present	As Adjusted	Adjustments	As Adjusted	As Adjusted	Pro Forma Present	As Adjusted	Adjustments	As Adjusted	Pro Forma Present	As Adjusted
1.	Gross Plant in Service	6,336,665	500,981	6,837,666	(66,858)	6,770,808	6,770,808	(66,858)	6,770,808	0	6,770,808	(103,965)	6,733,701
2.	Phoenix Office Allocation	193,170	193,170	193,170	12,795	205,965	19,629	(173,541)	19,629	149,824	169,453	45,963 (a)	239,133
3.	Meter Shop Allocation	4,024	4,024	4,024	444	4,468	444	(3,580)	444	2,567	3,011	0	239,133
4.	Total Gross Plant in Service	6,533,879	500,981	7,034,860	(53,619)	6,981,241	6,790,881	(243,979)	6,790,881	152,391	6,943,272	(58,002)	6,976,857
5.	Less: Accumulated Depreciation	(1,667,874)	(46,103)	(1,713,977)	(7,898)	(1,721,875)	(1,745,153)	(31,176)	(1,745,153)	(1,544)	(1,746,697)	(13,420)	(1,727,397)
6.	Net Plant in Service	4,866,005	454,878	5,320,883	(61,517)	5,259,366	5,045,728	(275,155)	5,045,728	150,847	5,196,575	(71,422)	5,249,461
7.	Construction Work in Progress	492	(492)	0	0	0	0	0	0	0	0	0	0
8.	Total Net Plant	4,866,497	454,386	5,320,883	(61,517)	5,259,366	5,045,728	(275,155)	5,045,728	150,847	5,196,575	(71,422)	5,249,461
9.	Less: Customers' Advances for Construction	(109,428)	(109,428)	(109,428)	0	(109,428)	(109,428)	0	(109,428)	0	(109,428)	6,180	(103,248)
10.	Contributions in Aid of Construction	(188,394)	(188,394)	(188,394)	0	(188,394)	(188,394)	0	(188,394)	0	(188,394)	(13,660)	(202,054)
11.	Gross	32,086	32,086	32,086	(1,061)	31,025	32,086	0	32,086	0	32,086	5,056	37,142
12.	Accumulated Amortization	(265,736)	0	(265,736)	(1,061)	(266,797)	(265,736)	0	(265,736)	0	(265,736)	(2,424)	(268,160)
13.	Net Contributions in Aid of Construction	(566,719)	(566,719)	(566,719)	0	(566,719)	(566,719)	0	(566,719)	0	(566,719)	(122,314)	(689,033)
14.	Deferred Income Tax	0	0	0	0	0	0	0	0	0	0	0	0
15.	Deferred CAP (Net)	81,768	81,768	81,768	0	81,768	(122,661)	(204,429)	(122,661)	26,631	(96,030)	(73,165) a	8,600
16.	Add: Total Working Capital Allowance	81,768	81,768	81,768	0	81,768	(122,661)	(204,429)	(122,661)	26,631	(96,030)	(73,165) a	8,600
17.	Total Rate Base Components & Adjustments	4,115,810	454,386	4,570,196	(62,578)	4,507,618	4,090,612	(479,584)	4,090,612	177,478	4,268,090	(269,325)	4,300,871
18.													
19.													

(a) Represents RUCO's proposed adjustment for Phoenix Office and Meter Shop.

ARIZONA WATER COMPANY  
PRO FORMA ADJUSTMENTS RATE BASE  
TEST YEAR 2001 SAN MANUEL

Line No.	Description	Company			Staff			RUCO				
		Actual	Pro Forma Present Adjustments	As Adjusted	Rejoinder Adjustments	As Adjusted	Pro Forma Present Adjustments	As Adjusted	Surrebuttal Adjustments	As Adjusted		
1.	Gross Plant in Service	1,455,009	99,591	1,554,600	(39,759)	1,514,841	0	1,514,841	(42,467)	1,512,133	0	1,512,133
2.	Phoenix Office Allocation	79,057		79,057	5,236	84,293	61,318	69,351	18,717 <sup>(a)</sup>	97,774	0	97,774
3.	Meter Shop Allocation	1,647		1,647	182	1,829	1,050	1,232		1,647	0	1,647
4.	Total Gross Plant In Service	1,535,713	99,591	1,635,304	(34,341)	1,600,963	62,388	1,595,424	(23,750)	1,611,554	0	1,611,554
5.	Less: Accumulated Depreciation	(724,297)	(11,777)	(736,074)	(194)	(736,269)	(2,424)	(711,379)	16,092	(719,982)	0	(719,982)
6.	Net Plant in Service	811,416	87,814	899,230	(34,535)	864,695	59,944	874,045	(7,658)	891,572	0	891,572
7.	Construction Work in Progress	2,844	(2,844)	0	0	0	0	0	0	0	0	0
8.	Total Net Plant	814,260	84,970	899,230	(34,535)	864,695	59,944	874,045	(7,658)	891,572	0	891,572
9.	Less: Customers' Advances for Construction	(23,194)		(23,194)	0	(23,194)	0	(23,194)	0	(23,194)	0	(23,194)
10.	Contributions in Aid of Construction											
11.	Gross	(20,375)		(20,375)	0	(20,375)	0	(20,375)	0	(20,375)	0	(20,375)
12.	Accumulated Amortization	2,990		2,990	46	3,036	2,990	2,990	528	3,518	0	3,518
13.	Net Contributions in Aid of Construction	(40,579)	0	(40,579)	46	(40,533)	0	(40,579)	528	(40,051)	0	(40,051)
14.	Deferred Income Tax	(93,372)		(93,372)	0	(93,372)	0	(93,372)	(17,534)	(110,906)	0	(110,906)
15.	Deferred CAP (Net)	0		0	0	0	0	0	0	0	0	0
16.	Add: Total Working Capital Allowance	28,714		28,714	0	28,714	(2,122)	(40,822)	(22,351)	6,363	17	6,380
17.	Total Rate Base Components & Adjustments	709,023	84,970	793,993	(34,489)	759,504	57,822	699,272	(47,015)	746,978	17	746,995

(b) - Represents RUCO's proposed adjustment for Phoenix Office and Meter Shop.

Schedule B-2 Comparisons  
**ARIZONA WATER COMPANY**  
**PRO FORMA ADJUSTMENTS RATE BASE**  
**TEST YEAR 2001 ORACLE**

Line No.	Description	Company		Rebinder		Staff		RUCO	
		Pro Forma Present Adjustments	As Adjusted	Adjustments	As Adjusted	Pro Forma Present Adjustments	As Adjusted	Adjustments	As Adjusted
1.	Gross Plant in Service	4,848,115	5,179,022	(114,391)	5,064,631	(114,391)	5,064,631	0	5,064,631
2.	Phoenix Office Allocation	93,008	93,008	6,161	99,169	(83,556)	81,589	72,137	115,559
3.	Meter Shop Allocation	1,937	1,937	214	2,151	(1,723)	1,458	1,242	1,937
4.	Total Gross Plant in Service	4,943,060	5,273,967	(108,016)	5,165,951	(199,670)	5,147,676	73,379	5,197,334
5.	Less: Accumulated Depreciation	(1,455,964)	(1,468,545)	(3,949)	(1,472,493)	(101,769)	(1,572,305)	(1,991)	(1,586,306)
6.	Net Plant in Service	3,487,096	3,805,422	(111,964)	3,693,458	(301,439)	3,575,371	71,388	3,611,028
7.	Construction Work in Progress	2,121	0	0	0	0	0	0	0
8.	Total Net Plant	3,489,217	3,805,422	(111,964)	3,693,458	(301,439)	3,575,371	71,388	3,611,028
9.	Less: Customers' Advances for Construction	(473,356)	(473,356)	0	(473,356)	0	(473,356)	0	(463,343)
10.	Contributions in Aid of Construction	(258,151)	(258,151)	0	(258,151)	0	(258,151)	0	(268,892)
11.	Gross	37,740	37,740	(1,225)	36,515	0	37,740	0	44,578
12.	Accumulated Amortization	(683,767)	(683,767)	(1,225)	(684,992)	0	(683,767)	0	(688,657)
13.	Net Contributions in Aid of Construction	(344,341)	(344,341)	0	(344,341)	0	(344,341)	0	(408,104)
14.	Deferred Income Tax	0	0	0	0	0	0	0	0
15.	Deferred CAP (Net)	52,086	52,086	0	52,086	(102,693)	(41,547)	9,060	(632)
16.	Add: Total Working Capital Allowance	2,503,195	2,819,400	(113,189)	2,706,211	(404,132)	2,495,716	(305,765)	2,513,634
17.	Total Rate Base Components & Adjustments	316,205	2,819,400	(113,189)	2,706,211	(404,132)	2,495,716	80,448	2,513,634

(b) - Represents RUCO's proposed adjustment for Phoenix Office and Meter Shop

ARIZONA WATER COMPANY  
PRO FORMA ADJUSTMENTS RATE BASE  
TEST YEAR 2001 WINKELMAN

Line No.	Description	Company			Reinhold			Staff			RUCO		
		Actual	Pro Forma Present Adjustments	As Adjusted	Adjustments	As Adjusted	As Adjusted	Pro Forma Present Adjustments	As Adjusted	As Adjusted	Adjustments	As Adjusted	Surrebuttal As Adjusted
1.	Gross Plant in Service	411,255	17,166	428,421	(7,294)	421,127	421,127	(7,294)	421,127	0	421,127	0	420,913
2.	Phoenix Office Allocation	11,089		11,089	11,824	22,913	12,216	1,127	9,728	(2,488)	13,751	0	13,751
3.	Meter Shop Allocation	231		231	256	487	256	26	173	(83)	231	0	13,751
4.	Total Gross Plant in Service	422,575	17,166	439,741	4,786	444,527	433,599	(6,142)	431,028	(2,571)	434,895	0	434,895
5.	Less: Accumulated Depreciation	(116,356)	(3,048)	(119,404)	(1,344)	(120,748)	(124,338)	(4,934)	(113,182)	11,156	(114,218)	(1)	(114,219)
6.	Net Plant in Service	306,219	14,118	320,337	3,442	323,779	309,261	(11,076)	317,946	8,585	320,677	(1)	320,676
7.	Construction Work in Progress	0		0	0	0	0		0	0	0	0	0
8.	Total Net Plant	306,219	14,118	320,337	3,442	323,779	309,261	(11,076)	317,946	8,585	320,677	(1)	320,676
9.	Less: Customers' Advances for Construction	(20,855)		(20,855)	0	(20,855)	(20,855)	0	(20,855)	0	(20,855)	0	(20,855)
10.	Gross	(1,835)		(1,835)	0	(1,835)	(1,835)	0	(1,835)	0	(1,835)	0	(1,835)
11.	Accumulated Amortization	264		264	(11)	253	264	0	264	0	312	0	312
12.	Net Contributions in Aid of Construction	(22,426)	0	(22,426)	(11)	(22,437)	(22,426)	0	(22,426)	0	(22,216)	0	(22,216)
13.	Deferred Income Tax	(34,918)		(34,918)	0	(34,918)	(34,918)	0	(34,918)	0	(41,317)	0	(41,317)
14.	Deferred CAP (Net)	0		0	0	0	0	0	0	0	0	0	0
15.	Add: Total Working Capital Allowance	2,906		2,906	0	2,906	(18,993)	(21,899)	(17,998)	995	(5,073)	(21)	(5,094)
16.	Total Rate Base Components & Adjustments	251,781	14,118	265,899	3,431	269,330	232,924	(32,975)	242,504	9,560	252,071	(22)	252,049

(a) - Represents RUCO's proposed adjustment for Phoenix Office and Meter Shop.

Schedule B-2 Comparisons

**ARIZONA WATER COMPANY**  
**PRO FORMA ADJUSTMENTS RATE BASE**  
**TEST YEAR 2001 SUPERIOR**

Line No.	Description	Company			Rejoinder			Staff			RUCO		
		Actual	Pro Forma Present Adjustments	As Adjusted	Adjustments	As Adjusted	As Adjusted	Pro Forma Present Adjustments	As Adjusted	As Adjusted	Pro Forma Present Adjustments	As Adjusted	Surrebuttal Adjustments
1.	Gross Plant in Service	4,023,648	303,877	4,327,525	(28,473)	4,299,052	0	(28,473)	4,299,052	0	(55,250)	4,272,275	0
2.	Phoenix Office Allocation	88,788		88,788	5,947	95,735	69,641	(80,665)	78,764	0	21,240 (a)	111,028	0
3.	Meter Shop Allocation	1,870		1,870	207	2,077	1,192	(1,663)	1,399	0		1,870	0
4.	Total Gross Plant in Service	4,115,306	303,877	4,419,183	(22,319)	4,396,864	70,833	(110,801)	4,379,215	0	(34,010)	4,385,173	0
5.	Less: Accumulated Depreciation	(970,047)	(16,039)	(986,086)	(4,811)	(990,897)	(1,109)	(80,890)	(1,066,085)	0	(63,277)	(1,049,363)	0
6.	Net Plant in Service	3,145,259	287,838	3,433,097	(27,130)	3,405,967	69,724	(191,691)	3,311,130	0	(97,287)	3,335,810	0
7.	Construction Work in Progress	0		0	0	0	0	0	0	0	0	0	0
8.	Total Net Plant	3,145,259	287,838	3,433,097	(27,130)	3,405,967	69,724	(191,691)	3,311,130	0	(97,287)	3,335,810	0
9.	Less: Customers' Advances for Construction	(384,759)		(384,759)	0	(384,759)	0	0	(384,759)	0	1,718	(383,041)	0
10.	Contributions in Aid of Construction				0		0	0		0	0		0
11.	Gross	(82,088)		(82,088)	0	(82,088)	0	0	(82,088)	0	0	(82,088)	0
12.	Accumulated Amortization	11,961		11,961	(423)	11,538	0	0	11,961	0	2,126	14,087	0
13.	Net Contributions in Aid of Construction	(454,886)	0	(454,886)	(423)	(455,309)	0	0	(454,886)	0	3,844	(451,042)	0
14.	Deferred Income Tax	(332,521)		(332,521)	0	(332,521)	0	0	(332,521)	0	(70,880)	(403,401)	0
15.	Deferred CAP (Net)	0	0	0	0	0	0	0	0	0	0	0	0
16.	Add: Total Working Capital Allowance	27,886		27,886	0	27,886	(6,566)	(81,312)	(53,426)	(59,992)	(37,956)	(10,070)	(1)
17.	Total Rate Base Components & Adjustments	2,385,738	287,838	2,673,576	(27,553)	2,646,023	63,158	(273,003)	2,463,731	2,463,731	(202,279)	2,471,297	(1)

(a) - Represents RUCO's proposed adjustment for Phoenix Office and Meter Shop.

Schedule C-1 Comparisons

**ARIZONA WATER COMPANY**  
Pro Forma Operating Income Statements  
Test year 2001  
Eastern Group - Summary

Line No.	Description	Company			Rebuttal & Rejoinder			Staff			RUCO			
		Actual	Pro Forma Present	As Adjusted	Adjustments	As Adjusted	As Adjusted	Pro Forma Present	As Adjusted	Adjustments	Pro Forma Present	As Adjusted	Adjustments	Surrebuttal
Operating Revenues:														
1.	Residential	11,533,006	(597,573)	10,935,433	0	10,935,433	0	96,209	11,031,642	0	11,031,642	11,976,059	(38,208)	11,937,851
2.	Commercial	2,840,678	(204,685)	2,635,993	0	2,635,993	0	0	2,635,993	0	2,635,993	2,635,993	0	2,635,993
3.	Industrial	94,808	(5,216)	89,592	0	89,592	0	0	89,592	0	89,592	89,592	0	89,592
4.	Private Fire Service	6,939	0	6,939	0	6,939	0	0	6,939	0	6,939	6,939	0	6,939
5.	Other	1,051,746	(68,587)	983,159	0	983,159	0	0	983,159	0	983,159	983,159	35	983,229
6.	Total Operating Revenues	15,529,177	(876,061)	14,653,116	0	14,653,116	0	96,209	14,749,325	0	14,749,325	15,693,777	(38,173)	15,655,604
Operating Expenses:														
Source of Supply Expenses:														
7.	Purchased Water	940,389	321,354	1,261,743	(20,197)	1,241,546	(25,188)	(233,579)	1,028,164	0	1,022,976	1,218,883	11,304	1,230,187
8.	Other	54,305	55	54,360	(14)	54,346	0	0	54,360	0	54,360	55,976	(1)	55,975
Pumping Expenses:														
9.	Purchased Power	1,286,379	26,581	1,312,960	(10,804)	1,302,156	0	(54,763)	1,258,197	0	1,258,197	1,416,602	(1)	1,416,601
10.	Purchased Gas	905	0	905	0	905	0	0	905	0	905	1,796	0	1,796
11.	Other	405,759	0	405,759	0	405,759	0	0	405,759	0	405,759	493,828	0	493,828
12.	Water Treatment Expenses	329,496	109,156	438,652	(80,590)	358,062	0	(77,706)	380,946	0	380,946	(61,031)	0	377,621
13.	Transmission and Distribution Expenses	1,962,945	159,257	2,122,202	0	2,122,202	0	(32,676)	1,689,526	0	1,689,526	(40,952)	0	1,681,250
14.	Customer Account Expenses	1,379,224	36,613	1,415,837	0	1,415,837	0	223	1,416,060	0	1,416,060	20,052	0	1,435,889
15.	Sales Expenses & Payroll	6,851	0	6,851	0	6,851	0	0	6,851	0	6,851	4,145	0	4,145
16.	Administrative and General Expenses	1,605,020	257,396	1,862,416	0	1,862,416	0	(64,394)	1,798,022	0	1,798,022	(39,807)	1	1,822,609
17.	Total Operation and Maintenance	7,571,273	910,412	8,481,685	(111,605)	8,370,080	(25,188)	(462,895)	8,018,790	0	7,993,602	26,914	11,303	8,519,902
18.	Depreciation and Amortization Expenses	1,802,267	486,466	2,288,733	(18,225)	2,270,508	0	(457,572)	1,813,161	0	1,813,161	(253,225)	276	2,035,784
19.	Taxes: Federal Income	935,727	(486,328)	449,399	72,420	521,819	(5,730)	412,088	861,487	0	855,757	487,728	(15,067)	922,080
20.	State Income	163,498	(107,133)	56,365	6,428	62,793	0	133,414	189,779	0	189,779	142,880	(3,421)	195,824
21.	Ad Valorem (Property)	1,081,365	151,400	1,232,765	507	1,233,272	4,201	41,831	1,274,596	0	1,278,797	(56,199)	0	1,176,566
22.	Other	1,354,625	(1,179,488)	175,137	0	175,137	0	0	175,137	0	175,137	212,008	0	212,008
23.	Total Operating Expenses	12,908,755	(224,671)	12,684,084	(50,475)	12,633,609	(26,717)	(333,134)	12,350,475	0	12,324,950	13,069,053	(6,909)	13,062,144
24.	Operating Income	2,620,422	(851,390)	1,769,032	50,475	2,019,507	26,717	429,343	2,398,375	0	2,425,092	2,624,724	(31,264)	2,593,460

(a) - Staff testified that Purchased Water for Apache Junction should be \$965,689, a difference of \$229,921 from Staff's Operating Income proposed. Effect is a decrease in Operating Income of \$140,787 (\$229,921 - \$965,689)

(a) - Staff testified that Purchased Water should be \$965,689  
Effect is a decrease in Operating Income of \$140,787 (\$229,291\*(1-.385988))

Comparisons of Schedule C-1

**ARIZONA WATER COMPANY**  
Pro Forma Operating Income Statements  
Test year 2001  
Bisbee - Summary

Line No.	Description	Company			Staff			RUCO					
		Actual	Pro Forma Present Adjustments	As Adjusted	Pro Forma Present Adjustments	As Adjusted	As Adjusted	Pro Forma Present Adjustments	As Adjusted	As Adjusted			
Operating Revenues:													
1.	Residential	1,065,586	(85,446)	980,140	0	980,140	0	979,793	0	979,793	68,042	1,048,182	1,036,344
2.	Commercial	278,068	(19,748)	258,320	0	258,320	0	258,320	0	258,320	0	258,320	258,320
3.	Industrial	1,869	(150)	1,719	0	1,719	0	1,719	0	1,719	0	1,719	1,719
4.	Private Fire Service	838	0	838	0	838	0	838	0	838	0	838	838
5.	Other	17,171	(1,239)	15,932	0	15,932	0	15,932	0	15,932	0	15,932	15,932
6.	Total Operating Revenues	1,363,532	(106,583)	1,256,949	0	1,256,949	0	1,256,802	0	1,256,802	68,042	1,324,891	1,313,153
Operating Expenses:													
Source of Supply Expenses:													
7.	Purchased Water	0	0	0	0	0	0	0	0	0	0	0	0
8.	Other	2,279	(4)	2,275	1	2,276	0	2,275	0	2,275	(141)	2,134	2,134
9.	Pumping Expenses:												
10.	Purchased Power	180,807	641	181,448	76	181,524	0	177,665	0	177,665	3,540	184,988	184,988
11.	Purchased Gas	401	0	401	0	401	0	401	0	401	802	1,203	1,203
12.	Water Treatment Expenses	43,218	0	43,218	0	43,218	0	43,218	0	43,218	(5,664)	37,554	37,554
13.	Transmission and Distribution Expenses	34,435	13,059	47,494	(6,131)	41,363	0	41,351	0	41,351	(5,739)	41,755	41,755
14.	Customer Account Expenses	203,387	10,436	213,823	0	213,823	0	209,562	0	209,562	(17,959)	195,864	195,864
15.	Sales Expenses & Payroll	167,213	1,261	168,474	0	168,474	0	168,471	0	168,471	1,619	170,093	170,093
16.	Administrative and General Expenses	987	0	987	0	987	0	987	0	987	(751)	236	236
17.	Total Operation and Maintenance	204,408	31,377	235,785	0	235,785	0	228,325	0	228,325	4,613	240,398	240,398
18.	Depreciation and Amortization Expenses	837,135	56,770	893,905	(6,054)	887,851	0	872,255	0	872,255	(19,680)	874,225	874,225
19.	Taxes: Federal Income	173,245	27,629	200,874	12,900	213,774	0	195,242	0	195,242	(7,517)	193,357	193,357
20.	State Income	32,549	(31,704)	845	(3,456)	(2,611)	(1,853)	(7,681)	(1,853)	(7,681)	12,689	13,534	13,534
21.	Ad Valorem (Property)	5,667	(6,964)	(1,297)	(1,278)	(2,575)	0	(1,892)	0	(1,892)	4,282	2,985	2,985
22.	Other	95,358	11,237	106,595	523	107,118	496	99,661	496	100,157	(19,510)	87,085	87,085
23.	Total Operating Expenses	1,282,305	(47,064)	1,235,241	0	1,235,241	0	1,182,104	0	1,182,104	9,159	1,200,864	1,200,864
24.	Operating Income	91,227	(59,519)	31,708	(2,635)	29,073	1,357	74,498	1,357	75,855	88,619	120,327	113,054



Comparisons of Schedule C-1  
**ARIZONA WATER COMPANY**  
Pro Forma Operating Income Statements  
Test year 2001  
Sierra Vista - Summary

Line No.	Description	Company			Staff			RUCO					
		Actual	Pro Forma Present Adjustments	As Adjusted	Rebuttal & Rejoinder Adjustments	As Adjusted	Pro Forma Present Adjustments	As Adjusted	Adjustments	As Adjusted	Surrebuttal Adjustments	As Adjusted	
Operating Revenues:													
1.	Residential	798,551	(62,640)	735,911	0	735,911	0	736,589	0	736,589	0	839,674	832,407
2.	Commercial	158,541	(11,766)	146,775	0	146,775	0	146,775	0	146,775	0	146,775	146,775
3.	Industrial	0	0	0	0	0	0	0	0	0	0	0	0
4.	Private Fire Service	1,027	0	1,027	0	1,027	0	1,027	0	1,027	0	1,027	1,027
5.	Other	13,588	(797)	12,791	0	12,791	0	12,771	0	12,771	0	12,771	12,771
6.	Total Operating Revenues	971,687	(75,203)	896,484	0	896,484	0	897,162	0	897,162	0	1,000,247	992,980
Operating Expenses:													
Source of Supply Expenses:													
7.	Purchased Water	0	0	0	0	0	0	0	0	0	0	0	0
8.	Other	1,533	7	1,540	(2)	1,538	0	1,540	0	1,540	0	1,448	1,448
Pumping Expenses:													
9.	Purchased Power	161,884	399	162,283	(174)	162,109	0	159,739	0	159,739	0	203,341	203,341
10.	Purchased Gas	504	0	504	0	504	0	504	0	504	0	549	549
11.	Other	27,471	0	27,471	0	27,471	0	27,471	0	27,471	0	23,895	23,895
12.	Water Treatment Expenses	21,802	4,673	26,475	(5,051)	21,424	0	21,444	0	21,444	0	26,202	26,202
13.	Transmission and Distribution Expenses	138,985	499	139,484	0	139,484	0	139,488	0	139,488	0	134,940	134,940
14.	Customer Account Expenses	121,012	1,631	122,643	0	122,643	0	122,647	0	122,647	0	114,602	114,602
15.	Sales Expenses & Payroll	666	0	666	0	666	0	666	0	666	0	157	157
16.	Administrative and General Expenses	137,373	21,223	158,596	0	158,596	0	153,467	0	153,467	0	111,912	111,912
17.	Total Operation and Maintenance	611,230	28,432	639,662	(5,227)	634,435	0	626,966	0	626,966	0	617,046	617,046
18.	Depreciation and Amortization Expenses	116,754	25,689	142,443	3,645	146,088	0	133,542	0	133,542	0	125,435	125,435
19.	Taxes, Federal Income	4,294	(20,540)	4,033	1,444	5,477	0	1,822	(1,289)	934	0	37,990	35,928
20.	State Income	4,294	(4,525)	(231)	(128)	(359)	0	401	0	401	0	9,555	8,818
21.	Ad Valorem (Property)	59,799	3,756	63,555	(31)	63,524	0	57,802	284	57,802	0	53,453	53,453
22.	Other	86,383	(70,437)	15,946	0	15,946	0	15,946	0	15,946	0	11,622	11,622
23.	Total Operating Expenses	903,033	(37,625)	865,408	(297)	865,111	0	835,195	(1,005)	835,190	0	854,870	852,302
24.	Operating Income	68,654	(37,576)	31,078	297	31,375	0	60,967	1,005	61,972	0	145,377	140,678

Comparisons of Schedule C-1

**ARIZONA WATER COMPANY**  
Pro Forma Operating Income Statements  
Test year 2001  
Miami - Summary

Line No.	Description	Company		Rebuttal & Rejoinder		Staff		RUCO			
		Actual	Pro Forma Present	Adjustments	As Adjusted	Pro Forma Present	Adjustments	As Adjusted	Pro Forma Present	Adjustments	As Adjusted
Operating Revenues:											
1.	Residential	1,138,614	(91,374)	0	1,047,240	(217)	1,047,023	0	1,047,023	56,639	1,103,679
2.	Commercial	353,482	(25,216)	0	328,266		328,266	0	328,266		328,266
3.	Industrial	69,111	(3,143)	0	65,968		65,968	0	65,968		65,968
4.	Private Fire Service	708	0	0	708		708	0	708		708
5.	Other	15,743	(986)	0	14,757		14,757	0	14,757		14,757
6.	Total Operating Revenues	1,577,658	(120,719)	0	1,456,939	(217)	1,456,722	0	1,456,722	56,639	1,513,578
Operating Expenses:											
Source of Supply Expenses:											
7.	Purchased Water	0	0	0	0		0	0	0	0	0
8.	Other	8,838	(6)	0	8,832		8,832	0	8,832	388	9,220
9.	Pumping Expenses:										
10.	Purchased Power	150,420	902	2	151,324	(40,123)	111,199	0	111,199	(6,363)	144,959
11.	Other	97,770	0	0	97,770		97,770	0	97,770	22	22
12.	Water Treatment Expenses	24,368	71,176	0	32,556	(62,992)	32,552	0	32,552	29,558	127,328
13.	Transmission and Distribution Expenses	236,363	26,665	0	263,028	(3,788)	259,240	0	259,240	(52,550)	42,994
14.	Customer Account Expenses	189,374	1,262	0	190,636	(1)	190,635	0	190,635	21,449	284,477
15.	Sales Expenses & Payroll	1,311	0	0	1,311		1,311	0	1,311	268	190,904
16.	Administrative and General Expenses	211,602	35,126	0	246,728	(7,589)	239,139	0	239,139	53	1,364
17.	Total Operation and Maintenance	920,046	135,125	0	1,055,171	(114,493)	940,678	0	940,678	(18,554)	228,174
18.	Depreciation and Amortization Expenses	158,782	46,102	0	204,884	(65,770)	139,114	0	139,114	(25,729)	1,029,442
19.	Taxes: Federal Income	60,140	(68,636)	7,899	212,783	95,937	87,441	0	136,940	(67,944)	136,940
20.	State Income	10,508	(15,120)	22,462	13,966	17,888	104,916	0	37,681	46,177	34,547
21.	Ad Valorem (Property)	111,042	(4,612)	(427)	(5,039)	23,875	19,263	0	8,313	(3,134)	7,622
22.	Other	148,797	121,044	70	121,114	(1,408)	119,636	600	120,236	(19,180)	101,864
23.	Total Operating Expenses	1,409,315	(12,367)	0	28,957	(61,859)	28,957		28,957	3,125	32,082
24.	Operating Income	168,343	(108,352)	32,982	1,363,966	61,642	1,335,089	(1,188)	1,333,901	(50,626)	1,346,322
				32,982	92,973		121,633	1,188	122,821	107,266	167,256

Comparisons of Schedule C-1  
**ARIZONA WATER COMPANY**  
Pro Forma Operating Income Statements  
Test year 2001  
San Manuel - Summary

Line No.	Description	Company			Rebuttal & Rejoinder			Staff			RUCO		
		Actual	Pro Forma Present	As Adjusted	Adjustments	As Adjusted	As Adjusted	Pro Forma Present	As Adjusted	As Adjusted	Adjustments	As Adjusted	As Adjusted
Operating Revenues:													
1.	Residential	481,078	(74,612)	406,466	0	406,466		(134)	406,332	0	406,332		
2.	Commercial	65,771	(10,581)	55,190	0	55,190			55,190	0	55,190		
3.	Industrial	0	0	0	0	0			0	0	0		
4.	Private Fire Service	60	0	60	0	60			60	0	60		
5.	Other	13,618	(1,085)	12,533	0	12,533			12,533	0	12,533		
6.	Total Operating Revenues	560,527	(86,278)	474,249	0	474,249		(134)	474,115	0	474,115		
Operating Expenses:													
Source of Supply Expenses:													
7.	Purchased Water	135,178	123,525	258,703	49	258,752		7,875	266,578	0	266,578		
8.	Other	6,246	0	6,246	0	6,246			6,246	0	6,246		
9.	Pumping Expenses:												
10.	Purchased Power	32,506	(1,148)	31,358	23	31,381		(1,024)	30,334	0	30,334		
11.	Other	0	0	0	0	0			0	0	0		
12.	Water Treatment Expenses	32,609	0	32,609	0	32,609			32,609	0	32,609		
13.	Transmission and Distribution Expenses	18,742	11,651	30,393	(9,263)	21,130		(9,269)	21,124	0	21,124		
14.	Customer Account Expenses	88,796	(5,650)	83,146	0	83,146		(1,981)	81,165	0	81,165		
15.	Sales Expenses & Payroll	86,301	439	86,740	0	86,740		(1)	86,739	0	86,739		
16.	Administrative and General Expenses	472	0	472	0	472			472	0	472		
17.	Total Operation and Maintenance	92,577	14,952	107,529	0	107,529		(3,103)	104,426	0	104,426		
18.	Depreciation and Amortization Expenses	493,427	143,769	637,196	(9,191)	628,005			629,693	0	629,693		
19.	Taxes: Federal Income	40,950	11,777	52,727	194	52,921		(13,004)	39,723	0	39,723		
20.	State Income	(15,304)	(63,409)	(78,713)	3,843	(74,870)		(11,274)	(89,987)	(687)	(110,477)		
21.	Ad Valorem (Property)	(2,874)	(13,986)	(16,860)	62	(16,800)		(3,181)	(19,823)	0	(19,823)		
22.	Other	38,291	14,962	53,253	(39)	53,214		6,359	59,612	216	59,828		
23.	Total Operating Expenses	48,298	(35,460)	12,838	0	12,838			12,838	0	12,838		
24.	Operating Income	602,988	57,671	660,659	(5,131)	655,528		(28,603)	632,056	(451)	631,605		
		(42,461)	(143,949)	(186,410)	5,131	(181,279)		28,469	(157,941)	451	(157,490)		

Line No.	Description	Company		Staff		RUCO							
		Actual	Pro Forma Present Adjustments	Rebuttal & Rejoinder Adjustments	Pro Forma Present Adjustments	Surrebuttal Adjustments	Pro Forma Present Adjustments	Surrebuttal Adjustments					
Operating Revenues:													
1.	Residential	720,666	(28,629)	692,037	0	692,037	0	693,228	0	693,228	0	693,228	0
2.	Commercial	124,985	(5,466)	119,519	0	119,519	0	119,519	0	119,519	0	119,519	0
3.	Industrial	0	0	0	0	0	0	0	0	0	0	0	0
4.	Private Fire Service	60	0	60	0	60	0	60	0	60	0	60	0
5.	Other	16,672	(711)	15,961	0	15,961	0	15,961	0	15,961	0	15,961	0
6.	Total Operating Revenues	862,383	(34,806)	827,577	0	827,577	0	828,768	0	828,768	0	828,768	0
Operating Expenses:													
Source of Supply Expenses:													
7.	Purchased Water	0	0	0	0	0	0	0	0	0	0	0	0
8.	Other	6,656	72	6,728	(9)	6,719	0	6,728	0	6,728	0	6,728	0
Pumping Expenses:													
9.	Purchased Power	87,807	(4,052)	83,755	(188)	83,567	0	82,839	0	82,839	0	82,839	0
10.	Purchased Gas	0	0	0	0	0	0	0	0	0	0	0	0
11.	Other	29,003	0	29,003	0	29,003	0	29,003	0	29,003	0	29,003	0
12.	Water Treatment Expenses	17,309	(3,991)	13,318	8,989	22,307	0	22,332	0	22,332	0	22,332	0
13.	Transmission and Distribution Expenses	79,930	9,768	89,698	0	89,698	0	87,974	0	87,974	0	87,974	0
14.	Customer Account Expenses	83,391	1,537	84,928	0	84,928	0	84,933	0	84,933	0	84,933	0
15.	Sales Expenses & Payroll	428	0	428	0	428	0	428	0	428	0	428	0
16.	Administrative and General Expenses	90,154	14,436	104,590	0	104,590	0	100,940	0	100,940	0	100,940	0
17.	Total Operation and Maintenance	394,676	17,770	412,446	8,812	421,260	0	415,177	0	415,177	0	415,177	0
18.	Depreciation and Amortization Expenses	116,913	12,582	129,495	3,947	133,442	0	125,940	0	125,940	0	125,940	0
19.	Taxes: Federal Income	59,924	(15,509)	44,415	(3,607)	40,808	0	49,775	(896)	59,844	0	59,844	0
20.	State Income	10,470	(3,416)	7,054	(43)	7,011	0	10,965	0	10,965	0	10,965	0
21.	Ad Valorem (Property)	48,774	7,296	56,070	(94)	55,976	0	57,357	219	57,576	0	57,576	0
22.	Other	63,130	(53,235)	9,895	0	9,895	0	9,895	0	9,895	0	9,895	0
23.	Total Operating Expenses	694,889	(34,512)	660,377	9,015	669,392	0	669,109	0	668,432	0	668,432	0
24.	Operating Income	167,494	(294)	167,200	(9,015)	158,185	0	159,659	677	160,336	0	160,336	0

Comparisons of Schedule C-1

**ARIZONA WATER COMPANY**  
Pro Forma Operating Income Statements  
Test year 2001  
Winkelman - Summary

Line No.	Description	Company			Rebuttal & Rejoinder			Staff			RUCO			
		Actual	Pro Forma Present	As Adjusted	Adjustments	As Adjusted	As Adjusted	Pro Forma Present	As Adjusted	Adjustments	As Adjusted	Pro Forma Present	As Adjusted	
Operating Revenues:														
1.	Residential	52,086	(3,769)	48,317	0	48,317	0	49,019	49,019	0	49,019	(7,955)	40,362	39,846
2.	Commercial	50,558	(3,953)	46,605	0	46,605	0	46,605	46,605	0	46,605	0	46,605	46,605
3.	Industrial	2,478	(207)	2,271	0	2,271	0	2,271	2,271	0	2,271	0	2,271	2,271
4.	Private Fire Service	0	0	0	0	0	0	0	0	0	0	0	0	0
5.	Other	846	(16)	830	0	830	0	830	830	0	830	0	830	830
6.	Total Operating Revenues	105,968	(7,945)	98,023	0	98,023	0	98,725	98,725	0	98,725	(7,955)	90,068	89,552
Operating Expenses:														
Source of Supply Expenses:														
7.	Purchased Water	0	0	0	0	0	0	0	0	0	0	0	0	0
8.	Other	747	12	759	(7)	752	0	759	759	0	759	58	817	816
Pumping Expenses:														
9.	Purchased Power	7,599	194	7,793	(109)	7,684	0	7,671	7,671	0	7,671	(1,191)	6,602	6,601
10.	Purchased Gas	0	0	0	0	0	0	0	0	0	0	0	0	0
11.	Other	4,034	0	4,034	0	4,034	0	4,034	4,034	0	4,034	(407)	3,627	3,627
12.	Water Treatment Expenses	3,361	(367)	2,994	210	3,204	0	3,236	3,236	0	3,236	470	3,464	3,464
13.	Transmission and Distribution Expenses	10,241	4,614	14,855	0	14,855	0	14,618	14,618	0	14,618	(4,368)	10,487	10,487
14.	Customer Account Expenses	11,570	274	11,844	0	11,844	0	11,842	11,842	0	11,842	(377)	11,467	11,467
15.	Sales Expenses & Payroll	56	0	56	0	56	0	56	56	0	56	(27)	29	29
16.	Administrative and General Expenses	11,508	1,887	13,395	0	13,395	0	12,958	12,958	0	12,958	(1,390)	12,005	12,005
17.	Total Operation and Maintenance	49,116	6,614	55,730	94	55,824	0	55,174	55,174	0	55,174	(7,232)	48,498	48,496
18.	Depreciation and Amortization Expenses	10,839	3,049	13,888	1,343	15,231	0	13,646	13,646	0	13,646	(2,748)	11,140	11,140
19.	Taxes: Federal Income	5,604	(3,872)	1,732	(414)	1,318	(124)	2,074	1,801	(124)	2,074	1,629	3,361	3,386
20.	State Income	979	(853)	126	(83)	43	0	397	397	0	397	1,552	1,678	1,691
21.	Ad Valorem (Property)	14,335	1,395	15,730	78	15,808	71	16,751	16,751	71	16,822	65	15,795	15,795
22.	Other	9,671	(8,291)	1,380	0	1,380	0	1,380	1,380	0	1,380	283	1,663	1,663
23.	Total Operating Expenses	90,544	(1,958)	88,586	1,018	89,604	(53)	89,096	89,096	(53)	89,096	(6,451)	82,171	82,171
24.	Operating Income	15,424	(5,967)	9,437	(1,018)	8,419	53	9,576	9,576	53	9,629	(1,504)	7,933	7,381

Comparisons of Schedule C-1

**ARIZONA WATER COMPANY**  
Pro Forma Operating Income Statements  
Test year 2001  
Superior - Summary

Line No.	Description	Company		Rebuttal & Rejoinder		Staff		RUCO			
		Actual	Pro Forma Present Adjustments	As Adjusted	Adjustments	As Adjusted	Pro Forma Present Adjustments	As Adjusted	Adjustments	Pro Forma Present Adjustments	As Adjusted
Operating Revenues:											
1.	Residential	628,575	(62,007)	566,568	0	566,568	(379)	566,189	0	566,189	0
2.	Commercial	108,630	(9,501)	99,129	0	99,129		99,129	0	99,129	0
3.	Industrial	21,244	(1,703)	19,541	0	19,541		19,541	0	19,541	0
4.	Private Fire Service	336	0	336	0	336		336	0	336	0
5.	Other	14,620	(1,226)	13,394	0	13,394		13,394	0	13,429	35
6.	Total Operating Revenues	773,405	(74,437)	698,968	0	698,968	(379)	698,589	0	707,448	(4,089)
Operating Expenses:											
Source of Supply Expenses:											
7.	Purchased Water	0	0	0	0	0		0	0	0	0
8.	Other	4,755	(26)	4,729	3	4,732		4,729	0	4,752	0
Pumping Expenses:											
9.	Purchased Power	76,492	(202)	76,290	77	76,367		76,290	0	76,290	0
10.	Purchased Gas	0	0	0	0	0		0	0	22	22
11.	Other	54,189	0	54,189	0	54,189		54,189	0	78,565	0
12.	Water Treatment Expenses	19,636	11,156	30,792	(8,836)	21,945	(8,847)	21,945	0	24,376	0
13.	Transmission and Distribution Expenses	122,942	36,632	159,574	0	159,574	(1,639)	157,935	0	173,665	0
14.	Customer Account Expenses	114,349	(23)	114,326	0	114,326	(4)	114,322	0	107,818	0
15.	Sales Expenses & Payroll	872	872	872	0	872		872	0	108,832	0
16.	Administrative and General Expenses	83,004	15,961	98,965	0	98,965	(3,527)	95,438	0	257	0
17.	Total Operation and Maintenance	476,239	63,498	539,737	(6,756)	530,981	(14,017)	525,720	0	97,719	0
18.	Depreciation and Amortization Expenses	102,778	16,039	118,817	4,811	123,628	(2,715)	116,102	0	484,821	0
19.	Taxes, Federal Income	10,778	(33,405)	(22,627)	2,122	(20,505)	(6,509)	(36,284)	(730)	110,049	0
20.	State Income	1,884	(7,358)	(5,474)	(281)	(5,755)	(944)	(6,418)	0	(11,020)	(1,204)
21.	Ad Valorem (Property)	65,046	(975)	64,071	0	64,071	10,805	74,876	241	2,842	(2,632)
22.	Other	86,003	(74,655)	11,348	0	11,348		75,117	0	73,087	0
23.	Total Operating Expenses	742,728	(36,856)	705,872	(2,104)	703,768	(13,380)	692,452	0	12,752	0
24.	Operating Income	30,677	(37,551)	(6,874)	2,104	6,097	(13,001)	6,586	(489)	687,057	(1,491)
										37,758	(2,598)
										40,391	(a)
										685,966	
										37,758	(a)

(35) - RUCO's formula did not include the additional \$35 adjustment to Other Revenues so income is understated.

ARIZONA WATER COMPANY  
ALLOCATION OF PHOENIX OFFICE  
TEST YEAR ENDED DECEMBER 31, 2001

Line Description	Phoenix Office @12/31/01 (a)	Phoenix Office @12/31/01 Revised	PHOENIX OFFICE ALLOCATION								
			Eastern Group	Apache Junction 0.2383	Bisbee 0.0531	Sierra Vista 0.0365	Miami 0.054	San Manuel 0.0221	Oracle 0.026	Winkelman 0.0031	Superior 0.0251
1. Gross Plant In Service	\$3,903,884	\$3,903,884	\$1,788,760	\$930,296	\$207,296	\$142,492	\$210,810	\$86,276	\$101,501	\$12,102	\$97,987
2. less: Accumulated Depreciation	(453,222)	(453,222)	(207,666)	(108,003)	(24,066)	(16,543)	(24,474)	(10,016)	(11,784)	(1,405)	(11,376)
3. Net Plant In Service	3,450,662	3,450,662	1,581,093	822,293	183,230	125,949	186,336	76,260	89,717	10,697	86,612
4. Construction Work In Progress	126,565	0 (b)	0	0	0	0	0	0	0	0	0
5. Total Net Plant	3,577,227	3,450,662	1,581,093	822,293	183,230	125,949	186,336	76,260	89,717	10,697	86,612
6. Less: Customers' Advances for Construction	0	0	0	0	0	0	0	0	0	0	0
7. Contributions In Aid of Construction											
8. Gross	0	0	0	0	0	0	0	0	0	0	0
9. Accumulated Amortization	0	0	0	0	0	0	0	0	0	0	0
10. Net Contributions In Aid Of Construction	0	0	0	0	0	0	0	0	0	0	0
11. Deferred Income Tax	0	0	0	0	0	0	0	0	0	0	0
12. Add: Total Working Capital Allowance (b)	0	0	0	0	0	0	0	0	0	0	0
13. Total Rate Base Components & Adjustments	\$3,577,227	\$3,450,662	\$1,581,093	\$822,293	\$183,230	\$125,949	\$186,336	\$76,260	\$89,717	\$10,697	\$86,612

(a) - Source: Schedule B-2, Page 10 of 11

(b) - Removed \$126,565 of CWIP since Post Test Year Plant Additions were included by system.

ARIZONA WATER COMPANY  
ALLOCATION OF METER SHOP  
TEST YEAR ENDED DECEMBER 31, 2001

Line	Description	Meter Shop @12/31/01 (a)	Eastern Group	Apache Junction 0.2383	Bisbee 0.0531	Sierra Vista 0.0365	Miami 0.054	San Manuel 0.0221	Oracle 0.026	Winkelman 0.0031	Superior 0.0251
<b>METER SHOP ALLOCATION</b>											
1.	Gross Plant In Service	\$99,104	\$45,410	\$23,617	\$5,262	\$3,617	\$5,352	\$2,190	\$2,577	\$307	\$2,488
2.	less: Accumulated Depreciation	(24,594)	(11,269)	(5,861)	(1,306)	(898)	(1,328)	(544)	(639)	(76)	(617)
3.	Net Plant In Service	74,510	34,141	17,756	3,956	2,720	4,024	1,647	1,937	231	1,870
4.	Construction Work In Progress	0	0	0	0	0	0	0	0	0	0
5.	Total Net Plant	74,510	34,141	17,756	3,956	2,720	4,024	1,647	1,937	231	1,870
6.	Less: Customers' Advances for Construction	0	0	0	0	0	0	0	0	0	0
7.	Contributions in Aid of Construction	0	0	0	0	0	0	0	0	0	0
8.	Gross	0	0	0	0	0	0	0	0	0	0
9.	Accumulated Amortization	0	0	0	0	0	0	0	0	0	0
10.	Net Contributions in Aid Of Construction	0	0	0	0	0	0	0	0	0	0
11.	Deferred Income Tax	0	0	0	0	0	0	0	0	0	0
12.	Add: Total Working Capital Allowance (b)	0	0	0	0	0	0	0	0	0	0
13.	Total Rate Base Components & Adjustments	\$74,510	\$34,141	\$17,756	\$3,956	\$2,720	\$4,024	\$1,647	\$1,937	\$231	\$1,870

(a) - Source: Schedule B-2, Page 11 of 11



**ARIZONA WATER COMPANY**  
**Docket No. W-1445A-02-0619**  
**Witness(es) Whitehead**

**Data Request No. RUCO 1.6**

**Construction Work In Progress** – *Please provide the following information for each system that is requesting a rate base adjustment for post test year construction projects;*

- a) List of each project and its associated cost;*
- b) Status of the project including its actual in-service date if now complete and its estimated date if not yet completed;*
- c) Indicate whether the cost information provided in response to part a) is an actual or estimated cost;*
- d) Copy of the work order for each project identified in response to part a);*
- e) Copy of the low bid that was accepted for each project identified in part a); and*
- f) For each project and cost identified in response to part a) please indicate whether the project is supported either by a CIAC or an AIAC, and if so the dollar amount of the advance or contribution.*

**Response to Data Request No. RUCO 1.6**

- a-b) A summary of the projects comprising the Company's request for a rate base adjustment for post test year construction projects is attached.
- c) Cost information that formed the basis of the rate base adjustments for post test year plant construction projects were based upon estimates of construction expenditures and overheads at the time of the filing of the application in this docket. Actual expenditures on projects that have already been completed are shown in Column f.-Expenditures-to-Date, Completed Projects on the schedule provided in response to items a. and b. above. These projects do not include any applicable overheads and may have some additional expenditures added.
- d) A copy of the work order for each project identified in response to part a) above is attached.
- e) A copy of the bid that was accepted for each project is attached.
- f) All of the projects comprising the Company's request for a rate base adjustment for post test year construction projects are non-revenue producing, inside-funded projects and, as such, are supported by neither CIAC or AIAC.



**ARIZONA DEPARTMENT OF REVENUE  
PROPERTY TAX FUNCTION**

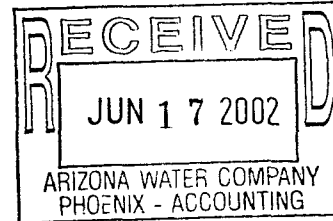
1600 West Monroe, Room 820, Phoenix, Arizona 85007  
Telephone: (602) 542-3529 Facsimile: (602) 542-5667

**JANE DEE HULL  
GOVERNOR**

**MARK W. KILLIAN  
DIRECTOR**

June 13, 2002

CVP TAXPAYER ID #55-510  
ARIZONA WATER CO - APACHE JUNCTION  
RALPH J KENNEDY  
P O BOX 29006  
PHOENIX, AZ 85038



**PRELIMINARY NOTICE OF VALUE**  
**TAX YEAR 2003**

The PRELIMINARY FULL CASH VALUE of your operating property located in Arizona is:

**\$16,376,000**

If the property owner disagrees with the PRELIMINARY FULL CASH VALUE stated above, an informal conference to discuss the value may be requested on or before July 15, 2002.

If an informal conference is requested, the request must be in writing and must list who will be attending the conference and what issues are to be discussed. The property owner must provide supporting documentation to justify his/her opinion of value no later than the day of the conference.

This PRELIMINARY FULL CASH VALUE is subject to change based on additional information provided by the taxpayer or otherwise discovered by the Department prior to August 31, 2002.

Final Notices of Value will be mailed on or before: August 31, 2002.

The valuation date for the above value is: January 1, 2002.

However, the value will not be used for property tax purposes until tax year 2003.

Taxes will be due as follows:

First half due: October 1, 2003

Second half due: March 1, 2004

If you have questions regarding this notice, please contact the Centrally Valued Property Unit at (602) 542-3529.



**ARIZONA WATER COMPANY**  
**Net Plant Comparisons**  
**Test Year 2001**

Line		Company Rebuttal (a)	Staff Surrebuttal (b)	Difference (b)-(a)
<b><u>TEST YEAR PLANT:</u></b>				
1	Gross Plant in Service (Undisputed)	<b>82,717,891</b>	<b>82,717,891</b>	<b>0</b>
2	Plant in Service			
3	Phoenix Office	1,788,760	1,472,535	
4	Meter Shop	45,410	30,373	
5	Total Gross Plant	Line 2+ Line 3	1,502,908	(331,262)
6	Accumulated Depreciation			
7	Phoenix Office	(207,666)	(198,762)	
8	Meter Shop	(11,269)	(11,073)	
9	Total Accumulated Depreciation	Line 6+Line 7	(209,835)	9,100
10	Net Plant			
11	Phoenix Office	Line 2+Line6	1,273,773	(307,321)
12	Meter Shop	Line 3+Line 7	19,300	(14,841)
13	Total Net Plant	Line 10 + Line 11	1,293,073	(322,162)
<b><u>POST TEST YEAR PLANT:</u></b>				
14	Plant in Service			
15	Phoenix Office	Staff's direct	166,550	
16	Meter Shop	Staff's direct	3,768	
17	Total Gross Plant	181,639	170,318	(11,321)
18	Total Phoenix Office/Meter Shop TY and PTY Plant	Line 12+ Line16	1,463,391	(333,483)
19	Test Year Gross Plant In Service	Line 17 + Line 18	<b>84,181,282</b>	<b>(333,483)</b>
20	Add back: Phoenix Office & Meter Shop Accum. Depr	From Line 8	209,835	
21	Gross Plant In Service Excluding PHX & MS Accum Depr	Line 20 + Line 19	84,391,117	
22	Accumulated Depreciation:			
23	Test Year Plant	(18,068,863)	(17,992,143)	
24	Full Year Depreciation		(2,037,594)	
25	Depreciation on Post Test Year Plant	(109,869)		
26	Addtl Six Months Depreciation on TY Plant	(124,784)	(37,564)	
27	Retirements - Post Test Year Additons	145,982	207,764	
28	Subtotal before PHX & MS Accumulated Depreciation	Lines 23-27	<b>(19,859,537)</b>	(1,702,003)
29	Phoenix Office	From Line 6	(198,762)	
30	Meter Shop	From Line 7	(11,073)	
31	Subtotal PHX & MS	Line 29+Line 30	(209,835)	
32	Adjusted TY Accumulated Depreciation W/ PHX & MS	Line 28+Line 31	(20,069,372)	
33	Net Plant In Service	Line 35+Line28	<b>64,321,745</b>	(2,035,486)

(a) - The Company's rebuttal reflected the Phoenix Office and Meter Shop test year plant net of accumulated depreciation while Staff's surrebuttal did not.

**Arizona Water Company  
Purchased Water Expense Comparisons  
Apache Junction  
Test Year 2001**

LINE NO.	DESCRIPTION	[A]		[B]		[C]		[C]	
		COMPANY DIRECT		ADJUSTMENT		COMPANY AS ADJUSTED		STAFF'S REJOINDER	
1	Purchased Water - CAP & City of Mesa Treatment	\$ 703,309	\$	-	\$	703,309	\$	703,309	
2	Purchased Water - Effluent	\$ 94,027	\$	-	\$	94,027	\$	94,027	
3	Purchased Water - Unreconciled Amount	\$ 7,875	\$	(7,875)	\$	-	\$	-	
4	Subtotal	\$ 805,211	\$	(7,875)	\$	797,336	\$	797,336	
5	November 2001 Mesa Treatment Cost	\$ 10,982	\$	-	\$	10,982	\$	10,982	
6	M&I Capital Costs (Currently Deferred)	\$ 113,939	\$	-	\$	113,939	\$	113,939	
7	Increase in CAWCD Charge Per Acre-Feet	\$ 41,304	\$	-	\$	41,304	\$	43,432	
8	Subtotal	\$ 166,225	\$	-	\$	166,225	\$	168,353	
9	Total Purchased Water before Exp Annual. Adj.	\$ 971,436	\$	(7,875)	\$	963,561	\$	965,689	
10	Expense Annualization Adjustment	\$ 31,604	\$	(12,371)	\$	19,233	\$	31,584 (a)	
11	Total Purchased Water (L9+L10)	\$ 1,003,040	\$	(20,246)	\$	982,794	\$	997,273	

(a) - Taken from REL-15 (Source of Supply - Expense Annualization)

**ARIZONA WATER COMPANY**



**Docket No. W-1445A-02-0619**

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**2002 RATE HEARING EXHIBIT NO. \_\_\_\_**

**For Test Year Ending 12/31/01**

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**PREPARED  
REJOINDER TESTIMONY & EXHIBITS  
OF  
Ralph J. Kennedy**

---

1 FENNEMORE CRAIG  
A Professional Corporation  
2 Norman D. James (No. 006901)  
Jay L. Shapiro (No. 014650)  
3 3003 North Central Avenue  
4 Suite 2600  
Phoenix, Arizona 85012-2913  
5 Telephone: (602) 916-5000  
6 Attorneys for Arizona Water Company  
7  
8

9 **BEFORE THE ARIZONA CORPORATION COMMISSION**

10  
11 IN THE MATTER OF THE  
APPLICATION OF ARIZONA WATER  
12 COMPANY, AN ARIZONA  
CORPORATION, FOR ADJUSTMENTS  
13 TO ITS RATES AND CHARGES FOR  
UTILITY SERVICE FURNISHED BY  
14 ITS EASTERN GROUP AND FOR  
CERTAIN RELATED APPROVALS.

Docket No. W-01445A-02-0619

15  
16  
17  
18  
19  
20  
21  
22 **REBUTTAL TESTIMONY OF RALPH J. KENNEDY**  
23  
24  
25  
26  
27  
28

1 Q. WHAT IS YOUR NAME, EMPLOYER AND OCCUPATION?

2 A. My name is Ralph J. Kennedy. I am employed by Arizona Water Company as  
3 Vice President and Treasurer.

4 Q. ARE YOU THE SAME RALPH J. KENNEDY WHO PREVIOUSLY FILED  
5 DIRECT AND REBUTTAL TESTIMONY IN THIS PROCEEDING?

6 A. Yes, I am.

7 Q. WHAT IS THE PURPOSE OF YOUR REJOINDER TESTIMONY?

8 The purpose of my testimony is to respond to the surrebuttal testimony of Staff  
9 and RUCO regarding rate design, consolidation of the Apache Junction and  
10 Superior systems, the weighted cost of capital, the elimination of the meter  
11 charge component of the NP-260 tariff and the benefits obtained by the PCG  
12 settlement for the Miami customers.

13 I. Rate Design

14 Q. MR. THORNTON HAS REFRAMED THE STATEMENT ON PAGE 9 OF YOUR  
15 REBUTTAL TESTIMONY. DOES MR. THORNTON ACCURATELY PORTRAY  
16 YOUR TESTIMONY?

17 A. No he does not. My actual testimony was: "My overall conclusion regarding  
18 Staff's rate design recommendations is that it is inadequately developed and  
19 lacks both depth and breadth of quantitative support." My statement specifically  
20 criticizes Staff's rate design recommendations, not neoclassical economics,  
21 marginal cost theory, or other complete, well-designed and documented  
22 analyses. Mr. Thornton's alleged marginal cost study, as reproduced on page 1  
23 of Exhibit RJK-RJ1, is nothing more than a one-half page "work paper". The  
24 study is not well-designed or well-documented and does not support Staff's rate  
25 design for the Apache Junction system on which it was supposedly based.  
26  
27  
28



1 Attempting to then apply the same flawed study to the remaining seven Eastern  
2 Group systems is likewise unsupportable.

3 **Q. WHY ISN'T MR. THORNTON'S WORK PAPER EVEN ADEQUATE TO**  
4 **SUPPORT STAFF'S APACHE JUNCTION RATE DESIGN?**

5 **A.** Staff's rate design is based on an imaginary cost of service study (COSS) with  
6 assumed results. In footnote 6 on page 9 of Mr. Thornton's Direct Testimony he  
7 describes the system benchmark rate as follows.

8 *The system benchmark rate is derived by multiplying .75*  
9 *times the revenue requirement and dividing the result by the*  
10 *test year gallonage. The system benchmark rate is an*  
11 *approximation of the average cost per 1,000 gallons if the*  
12 *rates were based on a cost-of-service study approach (and*  
13 *ignoring existing rates) that assumes that the customer*  
14 *charges make up 25 percent of costs and that 75 percent of*  
15 *costs are attributable to developing, treating and delivering*  
16 *the commodity.*

17 In other words, Staff's benchmark rate ignores the existing rates, which  
18 were based on an actual COSS, in favor of a fictitious study that would produce  
19 total commodity costs equal to 75 percent of the revenue requirement. This  
20 assumption leads to the resulting benchmark rate of \$3.09 and the 20% premium  
21 (shown as "Ratio 1.21") over the \$3.74 Average Incremental Cost (AIC) calculated  
22 on MR. Thornton's worksheet. Had Staff used the existing Apache Junction  
23 commodity rate of \$2.569 and compared that to the calculated AIC it would have  
24 produced a 46% premium ( $\$3.74 / \$2.569 = 1.46$ ). The current commodity cost  
25 unlike Staff's has the advantage of being based on a cost of service study  
26 accepted by the Commission. The second page of Exhibit RJK-RJ1 shows that by  
27 changing Staff's assumption that 75% of the revenue requirement is being  
28 recovered through the commodity charge a wide range of tier premiums could be  
29 advocated. What is the correct percentage to use for Apache Junction?

30 Any tier premium ratio calculated on this worksheet would be  
31 inappropriate for Apache Junction, however, because Staff's \$3.74 AIC  
32 calculation is not based on the cost of actual capacity additions. Instead, Staff's

1 calculation originated from Staff engineering estimates. See Staff Response to  
2 Company Data Request 7.4. Moreover, these estimates cannot be verified or  
3 tested because Staff was not able to produce them in response to data requests.  
4 See Staff Response to Company Data Request 7.5(b) ("the engineering estimates  
5 cannot be found in Staff's files. [Engineering] Data that were received or  
6 calculated were transferred to the Excel spreadsheet and likely discarded.)  
7 These Staff Responses are reproduced on Exhibit RJK-RJ2.

8 **Q DOES STAFF'S BENCHMARK RATE ASSUMPTION MAKE SENSE FOR THE**  
9 **OTHER SEVEN EASTERN GROUP SYSTEMS?**

10 A. Certainly not. Staff's benchmark rate ignores the differing characteristics of each  
11 system including differences in water availability, pumping cost, well productivity,  
12 population density, investment per customer and water demand. Using a single  
13 assumed commodity percentage of 75 percent in the face of accurate cost-based  
14 percentages makes no sense. The actual comparable percentages based on  
15 unadjusted test year revenue are shown on Exhibit RJK-RJ3. They vary from a  
16 low of 38.9 percent for San Manuel to a high of 66.2 percent for Apache Junction.  
17 I cannot stress enough that Staff's 75 percent assumption is inappropriate for any  
18 single Eastern Group System, much less all of them.

19 **Q. DO YOU WISH TO COMMENT ON MR. THORNTON'S TESTIMONY THAT**  
20 **STAFF DID NOT INTEND TO PRODUCE SUBSIDIES BETWEEN METER**  
21 **SIZES?**

22 A. It is the results of Staff's proposed rate design, not Staff's intentions that are  
23 significant. Staff may not have intended to produce subsidies between meter  
24 sizes but the fact is their recommended three tier rate design does just that in  
25 each of the Eastern Group systems as the charts included as Exhibit RJK-RJ4  
26 clearly show. The percent of use by each meter size that is priced at the highest  
27 tier three rate is directly related to meter size This unintended consequence of  
28 Staff's experimental rate design was discovered early in the process leaving me

1 to wonder how many other unintended consequences the Company and its  
2 30,000 Eastern Group customers will suffer if this untested approach to rate  
3 making goes into effect.

4 **Q. WHAT RATE DESIGN SHOULD BE ADOPTED IN THIS PROCEEDING?**

5 A. The evidence supporting the Company's proposed rate design shows that it is  
6 logical and cost of service based. It is also fair and easily understood by  
7 customers and regulators alike. It is a tested design that will not increase the risk  
8 of revenue instability. The Company's proposed rate design is exactly the same  
9 rate design adopted in the recently concluded Northern Group Phase I rate case.  
10 (See Decision No. 64282, December 28, 2001). Therefore, the Company's  
11 proposed rate design should be adopted by the Commission in this proceeding.

12 **II. Apache Junction and Superior System Consolidation**

13 **Q. HAS STAFF OR RUCO MODIFIED THEIR OPPOSITION TO THE COMPANY'S**  
14 **PROPOSAL TO CONSOLIDATE THE APACHE JUNCTION AND SUPERIOR**  
15 **SYSTEMS?**

16 A. No, both continue to oppose consolidation. Staff was silent on the issue in their  
17 surrebuttal. RUCO witness Rigsby testified that consolidation may be warranted  
18 after the systems share a common cost of service. Surrebuttal Testimony of  
19 William Rigsby at 21-22. In other words, both Staff and RUCO ignore the  
20 potential benefits of consolidation and instead focus on their assumption that the  
21 systems must first be interconnected. The Company, based on its experience  
22 with prior Commission decisions allowing rate consolidation of non-  
23 interconnected Company systems such as River Valley and Rimrock, Arizona  
24 City and Casa Grande, Forest Towne and Overgaard, Valley Vista and Sedona.  
25 Tierra Grande and Casa Grande among others disagrees. Certainly, a  
26 reasonable evaluation and conclusion on rate consolidation would consider more  
27 than one factor.  
28

1 Q. WHY SHOULD THE APACHE JUNCTION AND SUPERIOR SYSTEMS BE  
2 CONSOLIDATED AT THIS TIME?

3 A. There are several compelling reasons to consolidate these two systems in this  
4 rate case.

- 5 • Superior's existing rates are among the highest in the Company because  
6 the town's water must be pumped uphill from wells located 23 miles  
7 away.
- 8 • Superior is an economically depressed area while the nearby Apache  
9 Junction area is fast growing with better economic conditions. The  
10 Community Profiles prepared by the Arizona Department of Commerce  
11 for Apache Junction and Superior reproduced as Exhibit RJK-RJ5  
12 provide data and a narrative description on both areas. The following  
13 table summarizes information from the 2002 data illustrating Superior's  
14 small population and relatively depressed economy:

	Apache Junction	Superior
Population	33,570	3,280
Unemployment Rate	5.3%	8.5%
Taxable Sales Per Capita	\$10,800	\$2,622
Assessed Valuation Per Capita	\$5,251	\$1,620

- 20 • Superior's **existing** rates are significantly greater than Apache Junction's.
  - 21 ○ The 5/8" minimums are \$18.13 and \$12.43, respectively.  
22 Superior's minimum is 146% of Apache Junction's.
  - 23 ○ The commodity costs per MGallon are \$4.060 and \$2.569  
24 respectively. Superior's commodity cost is 158% of Apache  
25 Junction's .

- If the first step of a rate consolidation plan is not taken now the system specific rates that RUCO and Staff recommend will further widen the existing rate gap making future consolidation more difficult.
- Apache Junction and Superior have water that will require arsenic treatment. Without rate consolidation at this time, the already high cost of water in Superior will become disproportionately higher due to the substantial arsenic costs that will have to be spread over Superior's comparatively small customer base.
  - On a stand-alone basis Apache Junction's arsenic treatment facilities will cost \$573 per customer while Superior's will cost \$1,309.
  - With consolidation the arsenic treatment facilities for Apache Junction and Superior spread across the larger customer base will be \$630 per customer.
- These systems will be interconnected in the near future as Mr. Whitehead has testified. Direct Testimony of Michael J. Whitehead at 10. A new CCN filling in the open area between the Apache Junction and Apache Junction-Florence Junction CCN was approved by the Commission on September 10, 2003. (Decision No. pending) The Company now has a connected set of CCN's extending from Apache Junction to Superior as illustrated on the map of this area. Direct Testimony of Michael J. Whitehead, Exhibit 1.

**Q. HOW WOULD THE COMPANY'S TWO-STEP RATE CONSOLIDATION PROPOSAL IMPACT RATES FOR APACHE JUNCTION AND SUPERIOR CUSTOMERS?**

**A.** On the stand alone basis, recommended by RUCO and Staff, Apache Junction's revenues would have to increase 16.7% and Superior's would have to increase 71.4%, without even considering arsenic treatment costs. Under the Company's

1 two-step consolidation proposal, Apache Junction's revenues would increase  
2 22.2% and Superior's would increase 8.9%.

3 The effect of these alternative rate determination methods on customers  
4 with 5/8" meters is illustrated on Exhibit RJK-RJ6, a typical bill analysis. Line 20  
5 shows the effect on the average residential bill using both stand alone system  
6 rates and the Company's proposed consolidated rates. The dollar increase in the  
7 average customer's bill under stand-alone rates, as shown on line 21, is \$5.89 for  
8 Apache Junction and \$30.24 for Superior. Adopting consolidated rates results in  
9 a \$7.84 increase for the Apache Junction customers and a \$4.06 increase for  
10 Superior customers. Since the first-step of the Company's two-step consolidation  
11 proposal establishes only a common minimum, Superior customers will continue  
12 to pay more for their water under the Company's proposed consolidated rates  
13 because of Superior's higher commodity cost.

- 14 • Superior customers would pay \$46.55 for 7,000 gallons while Apache  
15 Junction customers would pay \$35.81.
- 16 • Superior customers would pay \$58.73 for 10,000 gallons while Apache  
17 Junction customers would pay \$43.38.

18 Each systems unique commodity costs will be retained until the next rate case, at  
19 which time the second step will establish a common commodity charge.

20 **III. Weighted Cost Of Capital**

21 **Q. DO YOU AGREE WITH THE WEIGHTED COST OF CAPITAL**  
22 **RECOMMENDED BY RUCO OR STAFF?**

23 **A.** No, I do not.

24 **Q. DO YOU BELIEVE THAT STAFF'S AND RUCO'S PROPOSED FOUR**  
25 **PERCENT COST OF SHORT-TERM DEBT SHOULD BE ADOPTED?**

26 **A.** No. The cost of short-term debt has been very volatile over the past several  
27 years as Exhibit RJK-RJ7 illustrates. The Company's short-term borrowing rate  
28 is not fixed but floats with the level of short-term market rates. During the 2001

test year, the prime rate was 9.5% for more than 6 months. By the end of the following year, the prime rate had dropped to 4.75%, a 50% decrease in one year as shown on the right chart axis. Given the extremely volatile nature of short-term rates since 2001, I recommend that the cost of short-term debt in this case be a 24-month average rather than a value at a particular point in time. I further recommend the 24-month average from January 2001 through December 2003, which is 5.798% before the 25 basis point reduction provided in our bank loan agreement. This results in a short-term rate of 5.548%.

**Q. WHAT OVERALL WEIGHTED COST OF CAPITAL DO YOU RECOMMEND?**

A. I recommend an overall weighted cost of 10.9% as shown in the following table.

	<u>Amount</u>	<u>Percent</u>	<u>Cost Rate</u>	<u>Composite Cost</u>
Short-Term Debt (a)	\$4,500,000	5.62%	5.54%	0.31%
Long-Term Debt (a)	22,600,000	28.24%	8.46%	2.39%
Common Stock Equity (a)	52,916,454	66.14%	12.40%	8.20%
Total	<u>\$80,016,454</u>	<u>100.00%</u>		<u>10.90%</u>

**IV. Meter Charge Component Of The NP-260 Tariff**

**Q. MR. HAMMON HAS PROPOSED THAT THE METER CHARGE COMPONENT OF THE NON-POTABLE NP-260 TARIFF BE ELIMINATED. DO YOU AGREE?**

A. No. I disagree with this recommendation for three reasons. First, I believe that the meter charge provides a small margin of safety to ensure that the costs of serving the NP-260 customers are fully recovered from rates. They should not receive any subsidy from the General Service customers. In fact, I believe it would be equitable for the NP-260 customers to provide a small contribution to the Company's operating income through the existing meter charge, offsetting the amount that the General Service customers must pay. Second, none of the NP-260 customers have complained about including a meter charge in their rate.

1 Finally the actual and adjusted operating revenue amounts adopted by all parties  
2 in this proceeding include all of the NP-260 meter revenue that Mr. Hammon  
3 proposes to eliminate. Accepting his recommendation at this time would require  
4 an offsetting increase to the General Service rates. For these reasons, I  
5 recommend that the NP-260 language requiring a meter charge be maintained.  
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**Q. DOES THIS CONCLUDE YOUR REJOINDER TESTIMONY?**

A. Yes, however, my silence on any point or recommendation made by RUCO or Staff in their surrebuttal testimony should not be regarded as the Company's acceptance of such point or recommendation.

1459656.1/12001.187

# EXHIBITS

# ***ARIZONA WATER COMPANY***

## **Index of Rejoinder Exhibits**

- RJK-RJ1**      Staff's AIC Worksheet Supporting 20% Marginal Cost Premium
- RJK-RJ2**      Staff Data Responses 7.3 and 7.5
- RJK-RJ3**      Chart Of Existing Commodity Revenue As A Percent Of Total Revenue
- RJK-RJ4**      Charts Of Tier 3 Use By Meter Size
- RJK-RJ5**      Apache Junction and Superior Community Profiles
- RJK-RJ6**      Bill Analysis Showing Effect of Apache Junction and Superior Consolidation
- RJK-RJ7**      Chart of Prime Rate And percentage Change From Prior 12 Months

interest rate 9%  
project life 40

9038642 RR  
2190849.9 Gallons  
15502 Customers

### Capital Requirements

Well	\$ 750,000	315,360.00
Tank	\$ 500,000	
Mains	\$ 1,584,000	0.625222222
Treatment		
	\$ 2,834,000	
Annualized	\$ 263,448	

0.75  
Commodity Monthly  
6778981.5 2259661  
3.0942245 12.14714  
Ratio: 1.21

Incremental customers	1,324
Sales 1,000 gals/customer/yr.	148.92
Incremental annual gals sold (000s)	197,170
Annualized capital/1,000 gals sold	1.33614356

### O&M/1000

	\$ 1.91
Treatment/1,000 gals.	\$ 0.50
Total AIC/1,000 gals.:	\$ 3.74

interest rate 9%  
project life 40

### Capital Requirements

Well \$ 750,000  
Tank \$ 500,000  
Mains \$ 1,584,000  
Treatment \$ 2,834,000  
Annualized \$ 263,448

Incremental customers 1,324  
Sales 1,000 gals/customer/yr. 148.92  
Incremental annual gals sold (000s) 197,170  
Annualized capital/1,000 gals sold 1,336,143,56

### O&M/1000

Treatment/1,000 gals. \$ 1.91  
Total AIC/1,000 gals.: \$ 0.50  
\$ 3.74

Changing this 75%  
assumption allows a  
wide range of  
premiums  
0.75

9038642 RR  
2190849.9 Gallons  
15502 Customers  
Commodity Monthly  
6778981.5 2259660.5  
3.0942245 12.147145

315,360.00  
0.625222222

Ratio: 1.21

Assume	Resulting Commodity	Tier Premium (Ratio)
0.40	1.65	2.27
0.45	1.86	2.02
0.50	2.06	1.81
0.55	2.27	1.65
0.60	2.48	1.51
0.65	2.68	1.40
0.70	2.89	1.30
0.75	3.09	1.21
0.80	3.30	1.13

What one assumption  
should be used that  
works for all 8 E.G.  
systems?

Staff's Assumption

**STAFF'S RESPONSES TO  
ARIZONA WATER COMPANY'S  
SEVENTH SET OF DATA REQUESTS  
ACC DOCKET NO. W-01445A-02-0619**

**September 2, 2003**

- 7.3 State where each amount shown on Exhibit A is found in the pre-filed testimony and schedules of the parties or, if such amount is not found in the pre-filed testimony and schedules, explain the basis for such amount so that it can be checked and verified.

**Response by John Thornton:**

The amounts \$3.74 and \$3.09 are found on page 9 of Mr. Thornton's testimony and the method is generally described in the footnote on page 9.

- 7.4 Provide copies of all work papers showing how the amounts shown on Exhibit A were calculated or otherwise determined so that these amounts can be checked and verified.

**Response by John Thornton:**

The amounts in Exhibit A originated from engineering estimates with the exceptions of the embedded revenue requirement, commodity allocation factor, and Apache Junction bill counts and actual gallons sold.

- 7.5 Attached to this set of data requests is an additional document, which is titled "Memorandum" and dated March 18, 2003, from John Thornton to Del Smith. With respect to that Memorandum, provide the following data and information:
- (a) Explain what each of the 15 symbols found in the text of the Memorandum means, and explain how they were to be used in developing Staffs proposed inverted block rates.
  - (b) Provide copies of all information submitted by the Engineering Section to Mr. Thornton (or to anyone else in the Financial & Regulatory Analysis Section) in response to the Memorandum.
  - (c) Provide all work papers and other documents showing the development and calculation of any of the information and data submitted by the Engineering Section to Mr. Thornton (or anyone in the Financial & Regulatory Analysis Section) in response to the Memorandum.
  - (d) Explain how the information and data obtained or developed in response to the Memorandum was used in connection with Mr. Thornton's incremental cost study.
  - (e) Explain how the information and data obtained or developed in response to the Memorandum was used in developing Staffs recommended rate design for each of the Company's Eastern Group systems.

**STAFF'S RESPONSES TO  
ARIZONA WATER COMPANY'S  
SEVENTH SET OF DATA REQUESTS  
ACC DOCKET NO. W-01445A-02-0619**

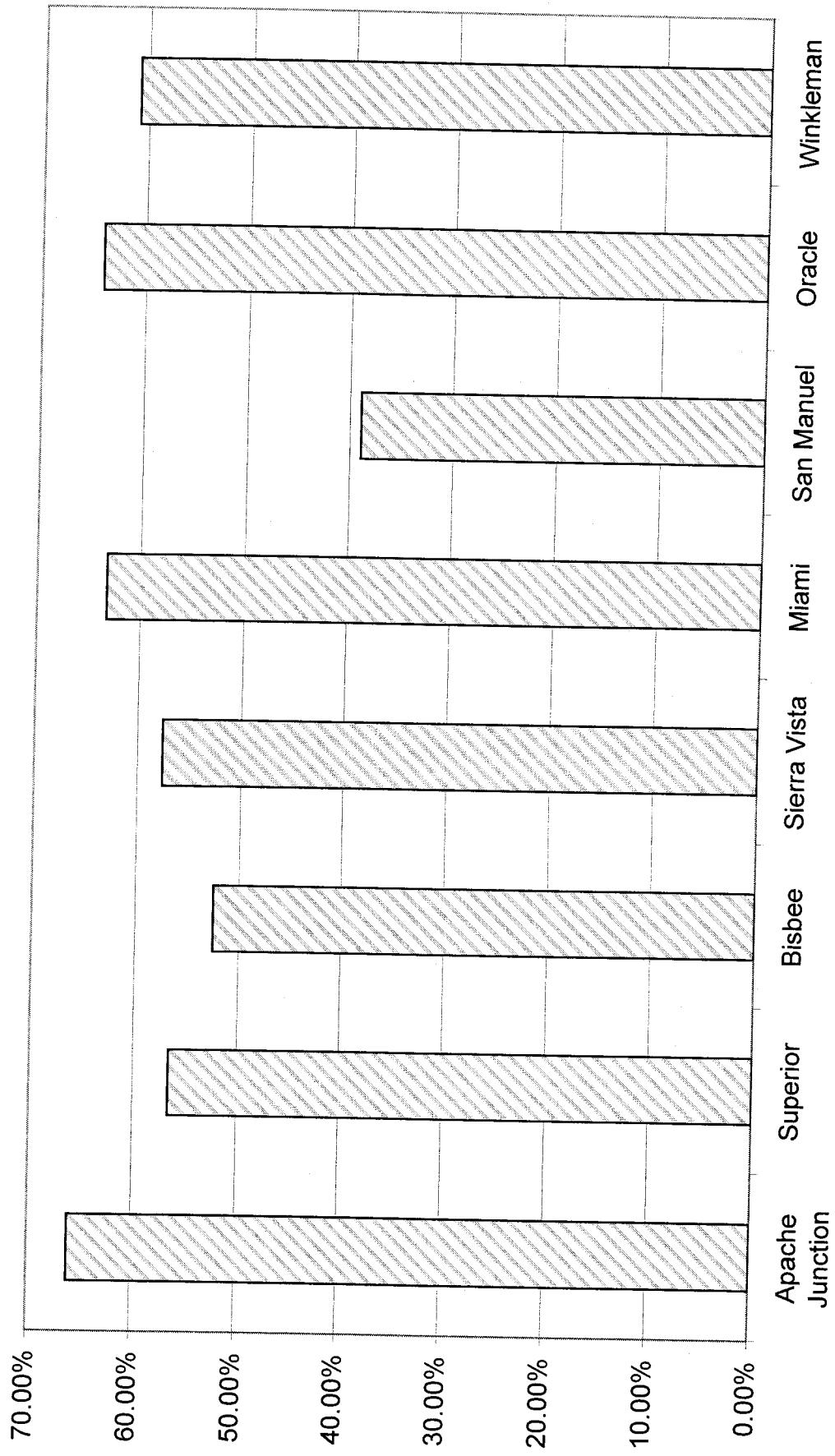
**September 2, 2003**

**Response by John Thornton:**

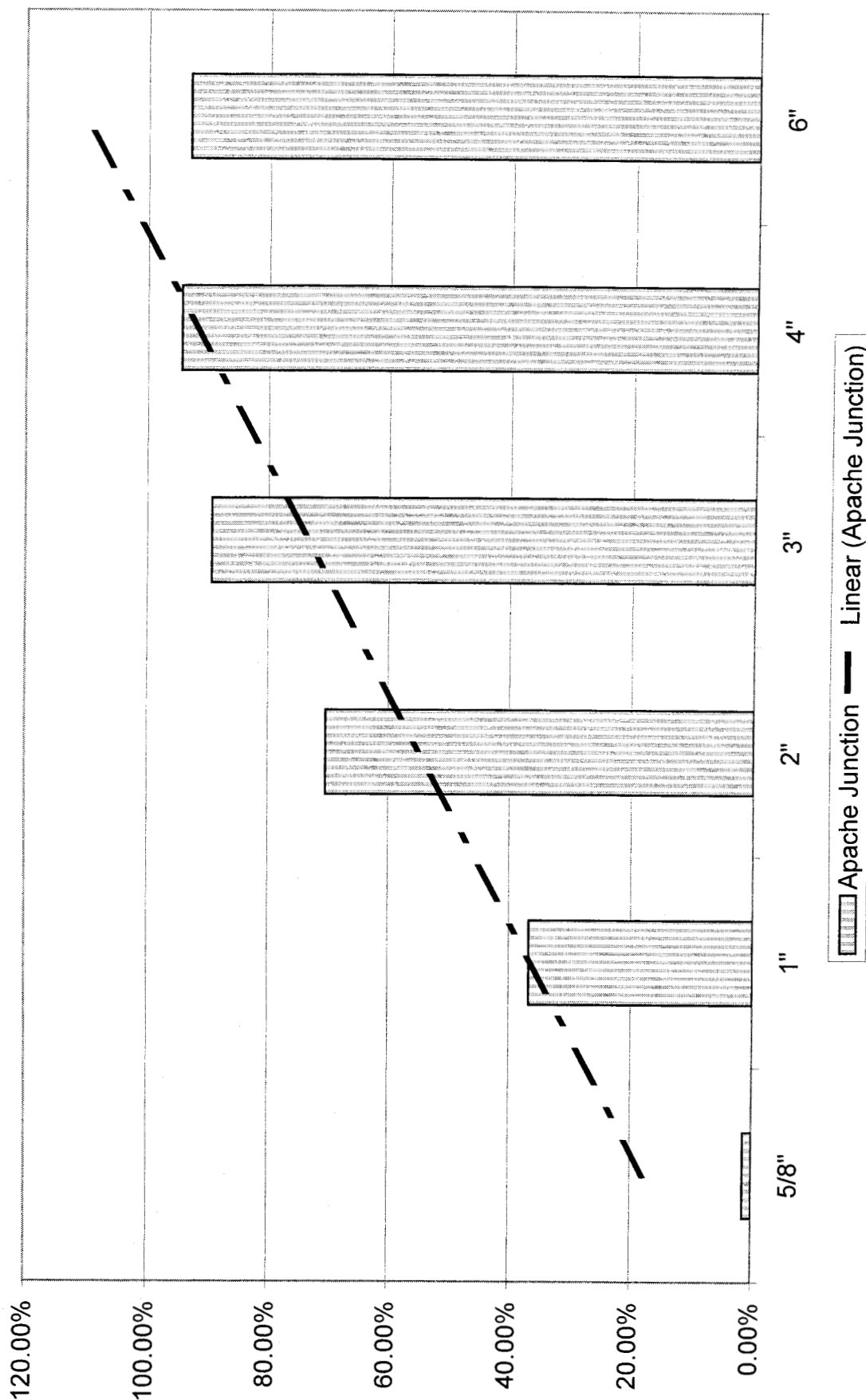
- (a) See *Cost Allocation and Rate Design for Water Utilities* by the NRRI, supplied in the working papers, beginning on page 63.
- (b) Staff cannot find any such information in its files. Data that were received or calculated were transferred to the Excel spreadsheet and likely discarded.
- (c) See Staff response to AWC Data Request No. 7.5(b), above.
- (d) See response to AWC Data Request No. 7.2, above.
- (e) See response to AWC Data Request No. 7.2, above, and Mr. Thornton's direct testimony.



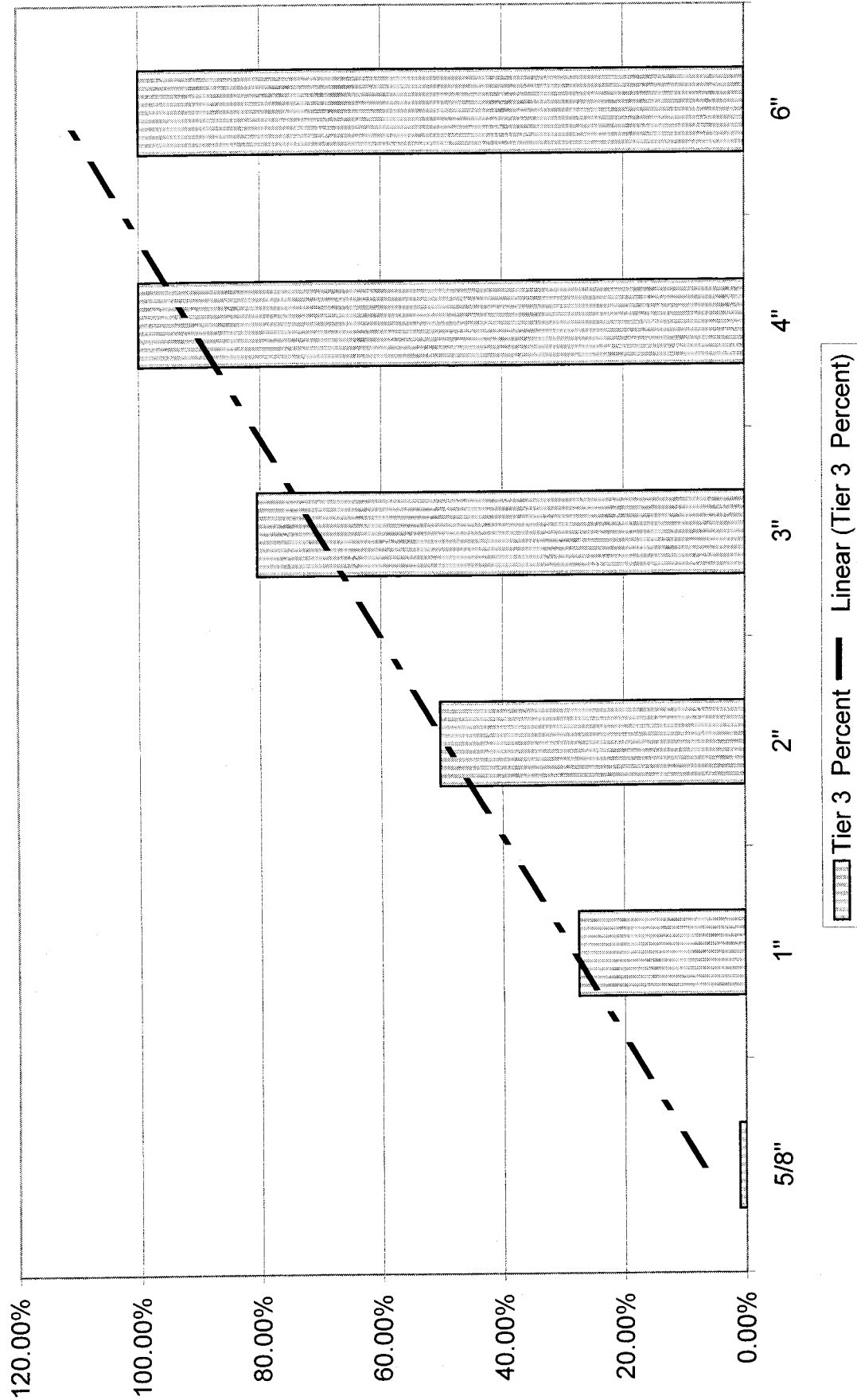
**Existing Commodity Revenue As A Percent Of Total Revenue  
Doesn't Equal Staff's 75% Benchmark Assumption**



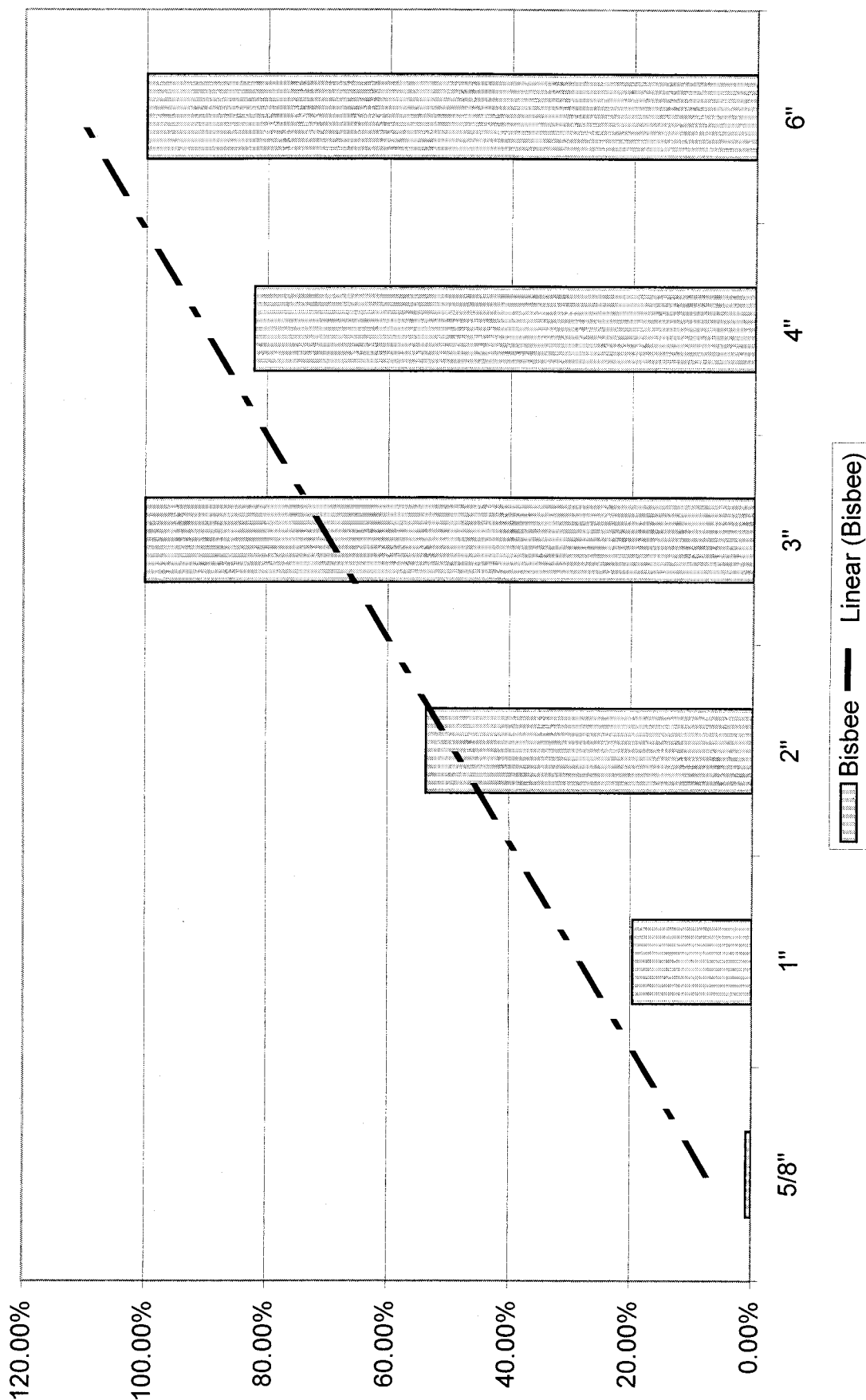
# Percent of Use In Tier 3 By Meter Size - Apache Junction



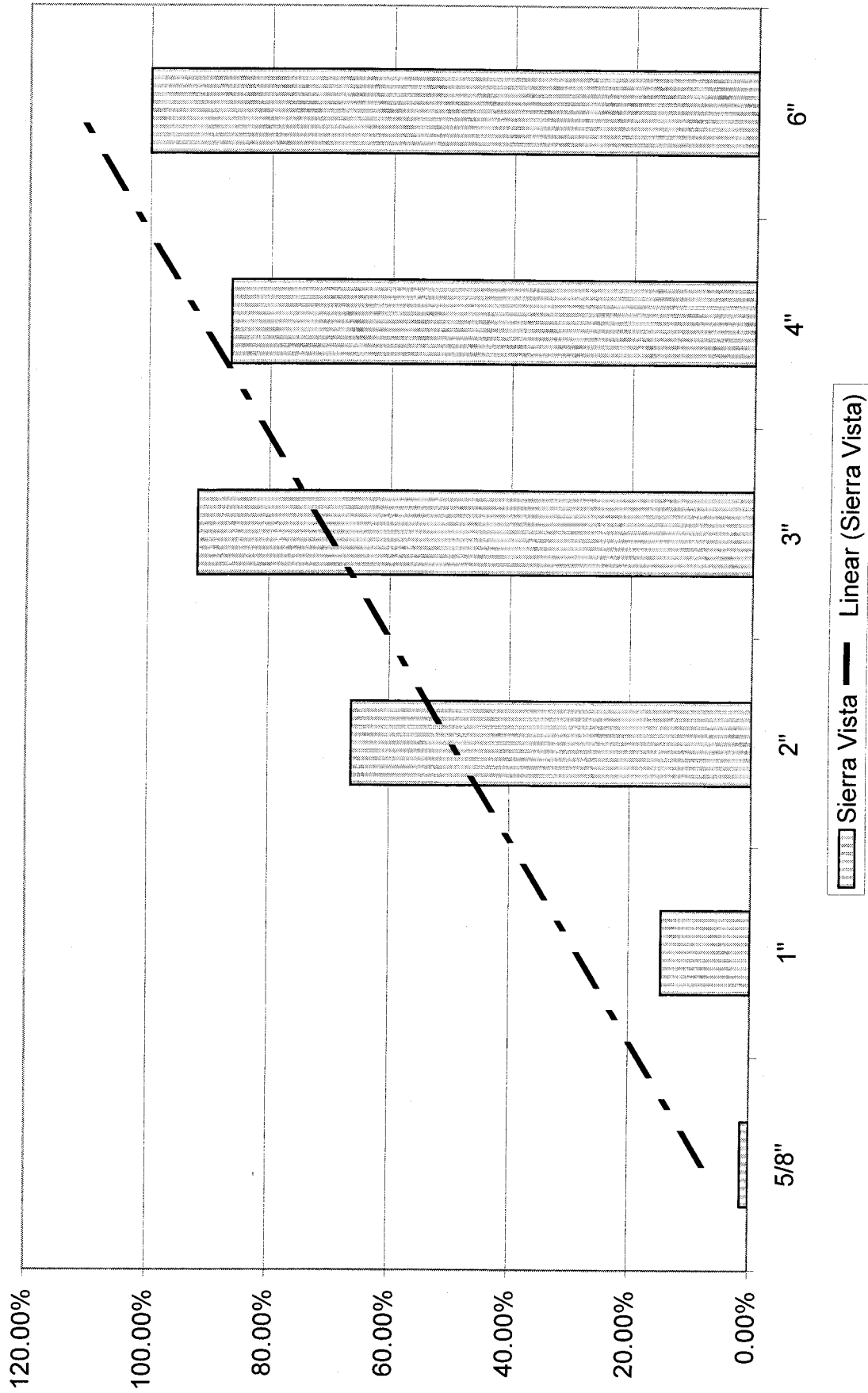
# Percent of Use In Tier 3 By Meter Size - Superior



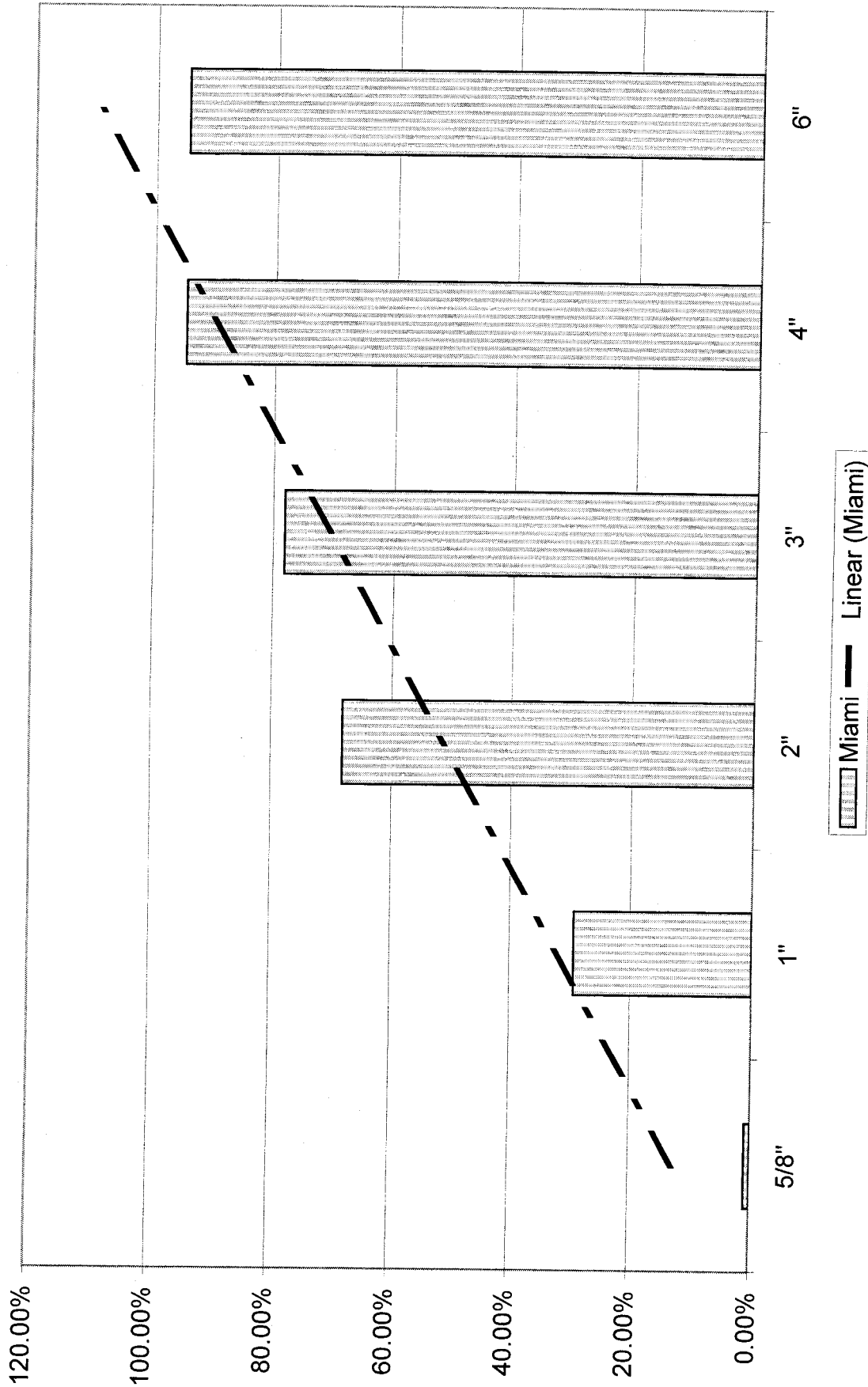
# Percent of Use In Tier 3 By Meter Size - Bisbee



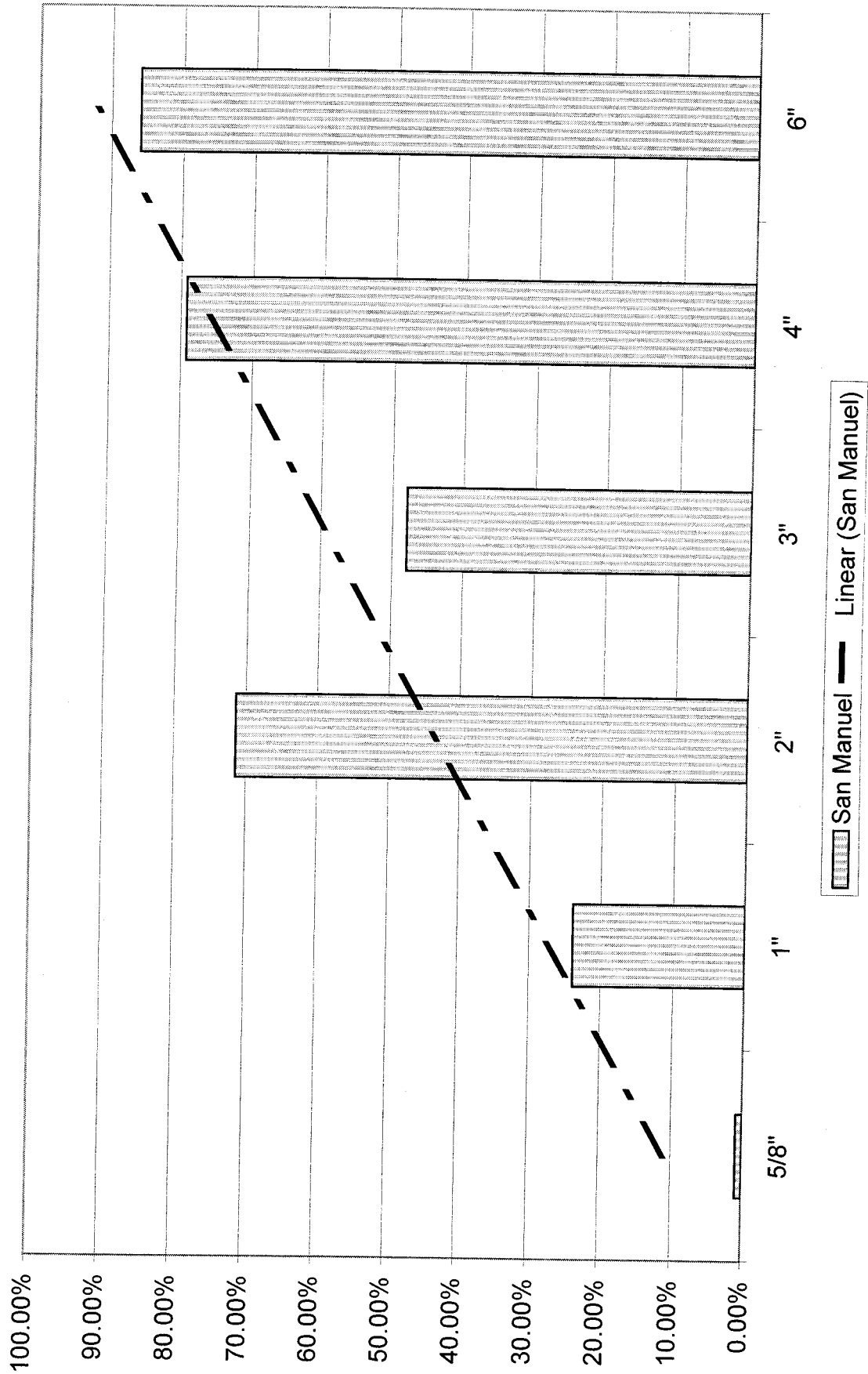
# Percent of Use In Tier 3 By Meter Size - Sierra Vista



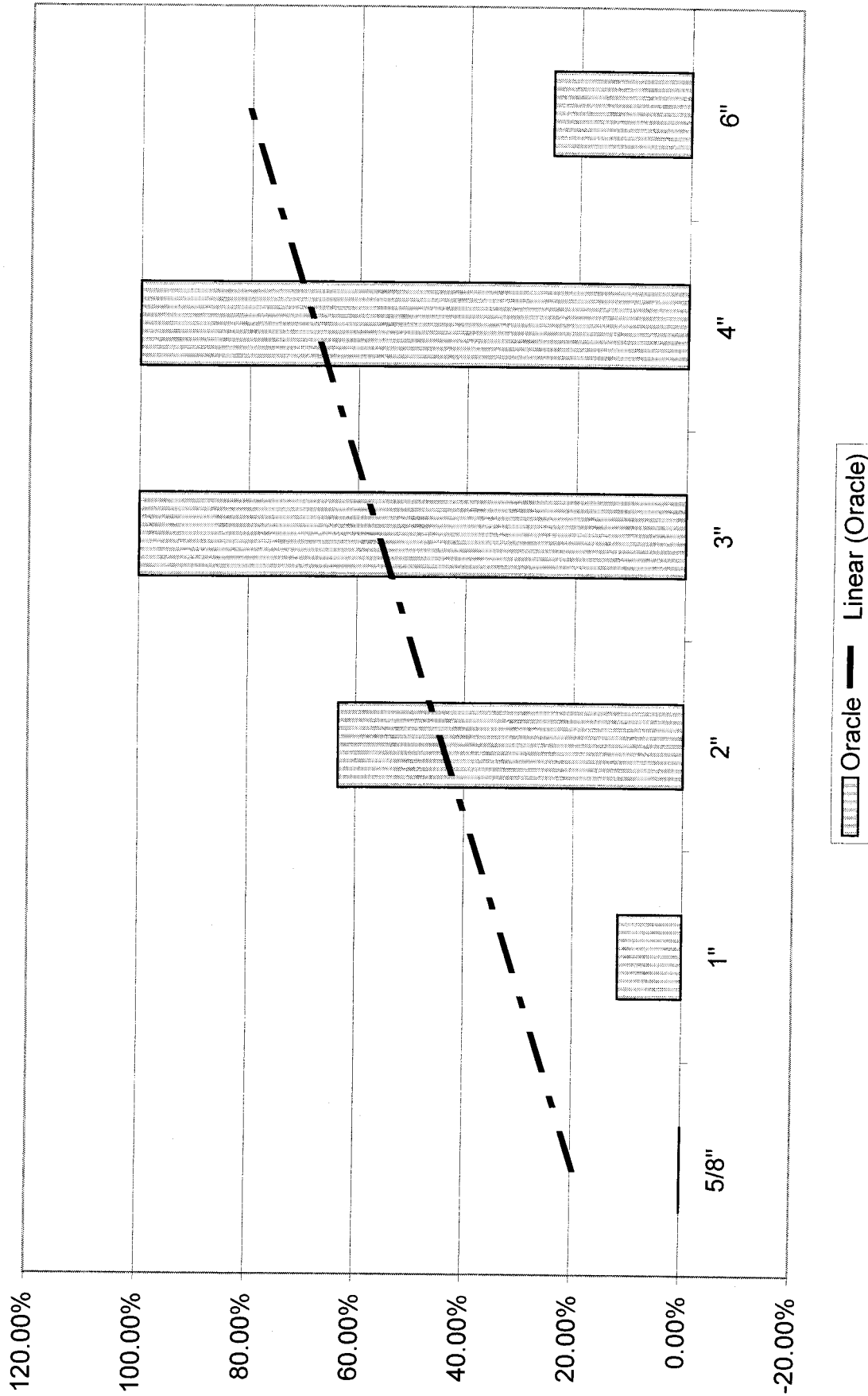
# Percent of Use In Tier 3 By Meter Size - Miami



# Percent of Use In Tier 3 By Meter Size - San Manuel

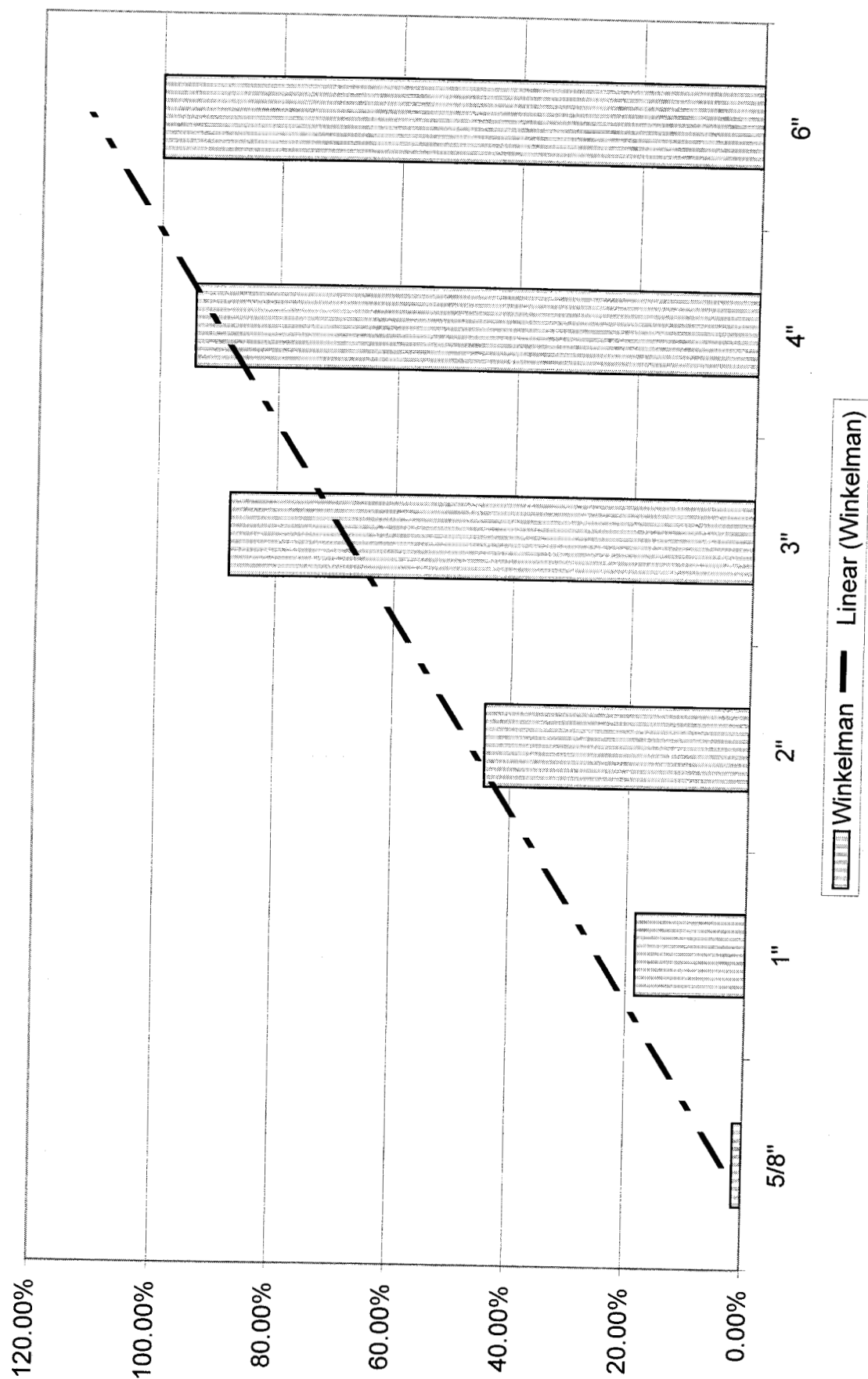


# Percent of Use In Tier 3 By Meter Size - Oracle





# Percent of Use In Tier 3 By Meter Size - Winkelman



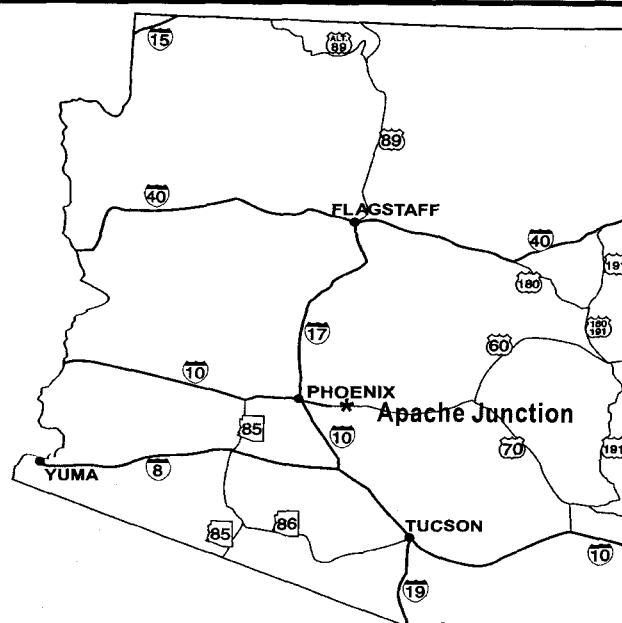
# APACHE JUNCTION

## Community Profile

### Prepared by the ARIZONA DEPARTMENT OF COMMERCE

Apache Junction is located on the eastern rim of the Phoenix metropolitan area, near the foot of the scenic Superstition Mountains at the junction of U.S. Highways 60 and 89 and state Highway 88. The community is easily accessible by U.S. 60, the Superstition Freeway. Its climate and proximity to outstanding recreational and historical areas draws over 40,000 winter visitors and retirees annually. More than 800 retail and service businesses currently operate within the city. A variety of life styles are offered in Apache Junction, including western rural acreage, urban single-family residential neighborhoods, adult-only retirement clusters and mixed age-group living areas.

COUNTY: Pinal County                      INCORPORATED: Yes - 1978  
HIGHWAYS: I-10, US 60                      ELEVATION: 1,715 feet  
DISTANCE TO PHOENIX: 36 miles              DISTANCE TO TUCSON: 128 miles  
ENTERPRISE ZONE AVAILABLE/MAIN STREET COMMUNITY



### POPULATION

	<u>1990</u>	<u>2000</u>	<u>2002</u>
Apache Junction	18,100	31,814	33,570
Pinal County	116,397	179,727	192,395
Arizona	3,665,228	5,130,632	5,472,750

Sources: Arizona Department of Economic Security and U.S. Census Bureau.

### PRINCIPAL ECONOMIC ACTIVITIES

Employment figures for Apache Junction do not truly represent its economic activity; proximity to metropolitan Phoenix gives a far more realistic indication of the area's economic base. Apache Junction's economy is based almost exclusively on recreation and retirement. Most commercial services in the area cater to tourists and recreation seekers on their way to Arizona's central lakes and forests. Extensive developments and accommodations serve many retired persons and winter visitors.

<u>County Employment</u>	<u>1990</u>	<u>2002</u>
Agriculture		2,382
Construction	900	1,700
FIRE	775	875
Government	9,200	15,875
Manufacturing	3,375	3,025
Mining	4,050	1,275
Services	4,425	8,575
TCPU	1,200	650
Trade	5,800	8,050

Sources: Arizona Department of Economic Security

NOTE: Agriculture figure from 2001 4th Qtr., AZ ES 202 Data, AZ Dept. of Econ. Sec. in cooperation with the U.S. Dept. of Labor, Bureau of Labor Statistics.

### LABOR FORCE DATA

	<u>1990</u>	<u>2000</u>	<u>2002</u>
Civilian Labor Force	7,350	9,592	10,150
Unemployed	342	294	539
Unemployment Rate	4.7%	3.1%	5.3%

Sources: Arizona Department of Economic Security.

<u>Growth Indicators</u>	<u>1990</u>	<u>2000</u>	<u>2002</u>
New Bldg. Permit	292	985	854
Taxable Sales (\$)	151,611,900	348,320,500	362,562,409
Net Assessed Valuation (\$)	56,979,353	83,019,687	109,142,714

Sources: Arizona State University; AZ Dept. of Revenue; AZ Tax Research Foundation

### SCENIC ATTRACTIONS

Apache Junction's main scenic attractions are the Superstition Mountains, which are reputed to be the site of the Lost Dutchman Mine. Many people are still challenged by the thought of discovering the Lost Mine and search the mountains for its location. The name of the mountains, of which Superstition Peak at 5,057 feet is the highest, can be attributed to the legends and stories of the nearby Pima Indians. The Apache Trail, which winds north from Apache Junction, is an exceptionally scenic mountain drive to recreation areas such as Canyon, Apache and Roosevelt lakes, all located in the Salt River Canyon. U.S. 60, to the east, leads to the active mining towns of Globe, Miami and Superior.

# APACHE JUNCTION

## Community Profile

### TAXES

Property Tax Rate	1990	2000	2002
Elem/High School	6.81	7.98	7.67
City/Fire District	1.92	2.53	2.53
Countywide	7.46	7.63	7.63
Total	\$16.19	\$18.14	\$17.83

Sources: Arizona Tax Research Foundation  
Note: Tax rate per \$100 assessed valuation.

NOTE: School districts pay an additional secondary rate of 0.1117 in 2002 for East Valley Institute of Technology (EVIT).

### Sales Tax Rate

City	2.20%
County	1.00%
State	5.60%

Sources: League of Arizona Cities and Towns, Arizona Dept. of Revenue

### COMMUNITY FACILITIES

Apache Junction offers a range of community facilities. There is a city library, senior center, community swimming pool and nine park sites with amenities such as playgrounds, picnic facilities, ball fields as well as basketball, racketball and tennis courts. The city also operates a municipal rodeo arena and events center. A 1,600-acre multi-use municipal park stretches along the city's northern and eastern boundaries and provides opportunities for horseback riding, hiking and activities such as bird watching.

#### Educational Institutions

	Public	Private
Community College	Y	N
Elementary	Y	N
High School	Y	N
Middle School	Y	N
Technical	N	Y
University 4 year	Y	N

#### Financial

Number of Banks: 2

#### Governmental Agencies

Fire Department: Fire District

Law Enforcement: City Police Department

Airports Falcon Field (15 miles west) and Williams Gateway - military reuse (6 miles southwest) both located in nearby Mesa.

#### Medical

Complete facilities in Mesa, 6 miles.

#### Hotel and Lodging Facilities

Number of Rooms: 260

Meeting Rooms: 4

Capacity of Largest Facility: 250

### Industrial Properties

Information available upon request. Contact the Apache Junction Chamber of Commerce.

### Utilities

Electricity	Salt River Project	602.236.8888
Natural Gas	Southwest Gas Corporation	602.861.1999
Sewer	Superstition Mtns. Comm. Fac. Dist.	480.983.2212
Telephone	Qwest (statewide)	800.244.1111
Water	Arizona Water Co.	602.240.6860

Cable Providers: Yes

Cable Internet Service Provider: No

Digital Switching Station: Yes

Fiber Optics: No

Internet Service Provider: No

### Weather

Month	Average Temperature (°F)		Average Total Precipitation (Inches)
	Daily Minimum	Daily Maximum	
January	34.7	66.0	0.83
February	37.0	70.3	0.66
March	40.0	75.0	0.88
April	44.9	82.8	0.38
May	51.8	91.7	0.11
June	60.1	100.5	0.12
July	71.1	102.8	0.98
August	70.0	101.0	1.05
September	62.6	97.3	0.60
October	51.9	87.1	0.79
November	41.4	75.0	0.63
December	35.7	66.9	1.06
Yearly Avg	50.1	84.7	8.08

Western Regional Climate Center, wrcc@dri.edu. Period of record 1948-1976. Nearest data available from Falcon Field, AZ.

This publication was prepared by the Arizona Department of Commerce Communications Division in cooperation with local sources.

For further information, contact:

Apache Junction Area Chamber of Commerce  
PO Box 1747 85017/567 W. Apache Trail  
Apache Junction, AZ 85217-3699  
480.982.3141 Fax: 480.982.3234  
Email: ajchamber@qwest.net  
www.apachejunctioncoc.com  
City of Apache Junction - Economic Development  
1001 N. Idaho Rd.  
Apache Junction, AZ 85219-2899  
480.671.5096

### Arizona Department of Commerce

1700 W. Washington, Suite 600  
Phoenix, AZ 85007  
602.771.1100 FAX: 602.771.1200  
http://www.azcommerce.com/

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Prepared on 5/2003

# SUPERIOR

## Community Profile

### Prepared by the ARIZONA DEPARTMENT OF COMMERCE

Superior is on U.S. 60 at the junction of state Highway 177. The town, in a mountainous setting, is surrounded by peaks such as 6,056-foot Iron Mountain. In 1900, George Lobb laid out the town, naming it Hastings. Mines dotted the hills around the prosperous Pinal County community. Stockholders in one of the successful silver mines lived in Michigan and named their mine Lake Superior. This mine fed the area economy and the community changed its name to Superior after this mine. The Magma Copper Company was established in 1910 and ran the Silver Queen Mine which became a great copper producer after its silver ran out. A smelter was built in 1924 and remained in operation for 47 years.

FOUNDED: 1882 INCORPORATED: Yes - 1976  
COUNTY: Pinal County ELEVATION: 2,820 feet  
DISTANCE TO PHOENIX: 63 miles DISTANCE TO TUCSON: 102 miles  
HIGHWAYS: US 60; SR 177  
ENTERPRISE ZONE AVAILABLE

### POPULATION

	1990	2000	2002
Superior	3,468	3,254	3,280
Pinal County	116,397	179,727	192,395
Arizona	3,665,228	5,130,632	5,472,750

Sources: Arizona Department of Economic Security and U.S. Census Bureau.

### PRINCIPAL ECONOMIC ACTIVITIES

Major employment sectors in the Superior area include mining, and trade and service. The community is improving its trade and service sector in order to expand the income from tourism. Agriculture is significant to the Pinal County economy. Ranching is conducted in the surrounding areas.

County Employment	1990	2002
Agriculture		2,382
Construction	900	1,700
FIRE	775	875
Government	9,200	15,875
Manufacturing	3,375	3,025
Mining	4,050	1,275
Services	4,425	8,575
TCPU	1,200	650
Trade	5,800	8,050

Sources: Arizona Department of Economic Security

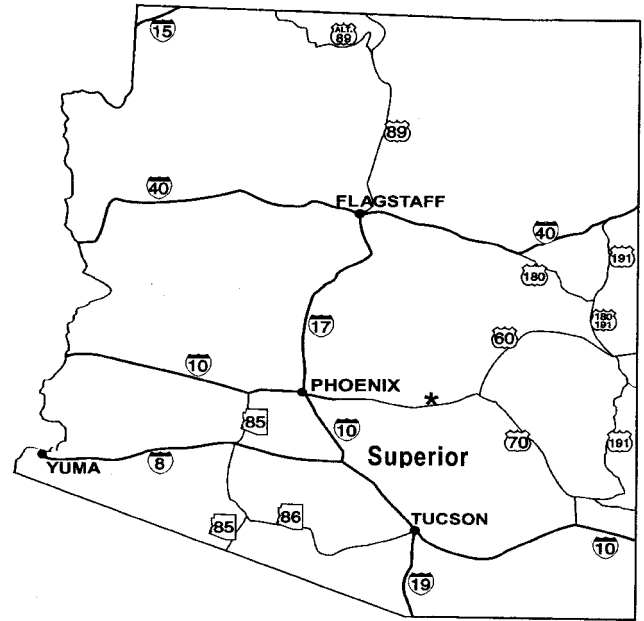
NOTE: Agriculture figure from 2001 4th Qtr., AZ ES 2002 Data, AZ Dept. of Econ. Sec. in cooperation with the U.S. Dept. of Labor, Bureau of Labor Statistics.

### Major Private Employers

Edwardo's Pizza Los Hermanos Restaurant  
Save Money Market

### Major Public Employers

Arizona Department of Transportation Boyce Thompson Arboretum  
CAAG Superior School District  
Town of Superior



### LABOR FORCE DATA

	1990	2000	2002
Civilian Labor Force	1,097	1,417	1,532
Unemployed	81	69	130
Unemployment Rate	7.4%	4.9%	8.5%

Sources: Arizona Department of Economic Security.

Growth Indicators	1990	2000	2002
New Bldg. Permit	6	12*	N/R
Taxable Sales (\$)	5,588,100	11,313,700	8,602,250
Net Assessed Valuation (\$)	3,412,490	4,160,038	5,315,246

Sources: Arizona State University; AZ Dept. of Revenue; AZ Tax Research Foundation

\* Incomplete data: One or more months not available; N/R: No report

### SCENIC ATTRACTIONS

Along the famous 98-mile Apache Trail on state Highway 88, imposing saguaros, rugged mountains, desert vistas, and four lakes created by dams on the Salt River give the traveler a glimpse of Arizona's beauty and diversity. East of town are Queen Creek Bridge and Tunnel. On the eastern side of Queen Creek Canyon are the red-streaked towering cliffs of Apache Leap Mountain where Apaches are said to have jumped rather than surrender to U.S. troops. Nearby attractions include Magma Copper Company Mine, the state's largest underground mine; Oak Flats campground; and Boyce Thompson Southwestern Arboretum, with more than 10,000 desert plants. Superior has identified three historic districts and the Superior Historical Society opened the home of Bob Jones (Arizona's sixth governor) as a museum.

# SUPERIOR

## Community Profile

### TAXES

Property Tax Rate	1990	2000	2002
Elem/High School	8.78	7.64	10.29
City/Fire District	0.00	4.12	4.50
Countywide	7.46	7.63	7.63
<b>Total</b>	<b>\$16.24</b>	<b>\$19.39</b>	<b>\$22.42</b>

Sources: Arizona Tax Research Foundation

Note: Tax rate per \$100 assessed valuation.

NOTE: School districts pay an additional secondary rate of 0.500 in 2002 for the Cobre Valley Institute of Technology (CVIT).

### Sales Tax Rate

City	2.00%
County	1.00%
State	5.60%

Sources: League of Arizona Cities and Towns, Arizona Dept. of Revenue

### COMMUNITY FACILITIES

The Town of Superior has a broad range of community facilities including a senior center, a community center, a library, one swimming pool, a Little League field, two parks with football, softball and baseball fields, and the First Municipal Peace Site in Arizona.

#### Educational Institutions

	Public	Private
Elementary	Y	N
High School	Y	N
Middle School	Y	N

#### Financial

Number of Banks: 1

#### Governmental Agencies

Fire Department: Volunteer

Law Enforcement: City Police Department

#### Airports

Local municipal airport has one 3,000-ft. runway.

#### Medical

Copper Canyon Health care and Cobra Valley Health Care Clinic

#### Hotel and Lodging Facilities

Number of Rooms: 24

Meeting Rooms: 5

Capacity of Largest Facility: 850

### Industrial Properties

A 46-acre fully improved industrial park is offering parcels ranging from two to nine acres.

### Utilities

Electricity	APS (Statewide)	800.253-9407
Natural Gas	Southwest Gas Corp. (Statewide)	800.766.9722
Sewer	Municipal (Superior)	520.689.5752
Telephone	Qwest (statewide)	800.244.1111
Water	Arizona Water Company (Superior)	520.689.2312

Cable Providers: Yes

Cable Internet Service Provider: Yes

Digital Switching Station: Yes

Fiber Optics: Yes

Internet Service Provider: Yes

### Weather

Month	Average Temperature (°F)		Average Total
	Daily Minimum	Daily Maximum	Precipitation (Inches)
January	42.9	60.7	2.03
February	45.3	64.1	1.93
March	48.1	68.3	2.03
April	54.3	76.3	0.79
May	62.3	85.7	0.36
June	71.8	95.3	0.27
July	75.5	97.5	1.95
August	74.0	95.4	2.81
September	71.0	92.0	1.51
October	61.9	82.4	1.23
November	50.9	69.7	1.46
December	44.1	61.6	2.16
Yearly Avg	58.5	79.1	18.52

Western Regional Climate Center, wrcc@dri.edu. Period of record 1920-2001. Avg. snowfall 0.15 in.

This profile was prepared by the Arizona Department of Commerce Communications Division in cooperation with local sources.

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Prepared on 5/2003

Arizona Water Company

TYPICAL BILL ANALYSIS  
PRESENT AND PROPOSED 5/8" RATES  
WITHOUT TAXES TEST YEAR 2001

Line No.	Gallons Consumption	Apache Junction			Apache Junction Consolidated			Superior			Superior Consolidated		
		Present Rates	Proposed Rates	Percent Increase	Present Rates	Proposed Rates	Percent Increase	Present Rates	Proposed Rates	Percent Increase	Present Rates	Proposed Rates	Percent Increase
1.	0	\$12.43	\$14.50	16.7%	\$12.43	\$18.13	45.9%	\$18.13	\$31.07	71.37%	\$18.13	\$18.13	0.00%
2.	1,000	12.43	17.20	38.4%	12.43	20.66	66.2%	18.13	37.08	104.51%	18.13	22.19	22.39%
3.	2,000	15.00	19.90	32.6%	15.00	23.18	54.5%	22.19	43.08	94.16%	22.19	26.25	18.30%
4.	3,000	17.57	22.59	28.6%	17.57	25.71	46.3%	26.25	49.09	87.01%	26.25	30.31	15.47%
5.	4,000	20.14	25.29	25.6%	20.14	28.23	40.2%	30.31	55.10	81.78%	30.31	34.37	13.39%
6.	5,000	22.71	27.99	23.3%	22.71	30.76	35.4%	34.37	61.11	77.79%	34.37	38.43	11.81%
7.	6,000	25.28	30.69	21.4%	25.28	33.28	31.7%	38.43	67.11	74.63%	38.43	42.49	10.56%
8.	7,000	27.84	33.39	19.9%	27.84	35.81	28.6%	42.49	73.12	72.09%	42.49	46.55	9.56%
9.	8,000	30.41	36.08	18.6%	30.41	38.33	26.0%	46.55	79.13	69.98%	46.55	50.61	8.72%
10.	9,000	32.98	38.78	17.6%	32.98	40.86	23.9%	50.61	85.13	68.21%	50.61	54.67	8.02%
11.	10,000	35.55	41.48	16.7%	35.55	43.38	22.0%	54.67	91.14	66.71%	54.67	58.73	7.43%
12.	11,000	38.12	44.18	15.9%	38.12	45.91	20.4%	58.73	97.15	65.41%	58.73	62.79	6.91%
13.	12,000	40.69	46.88	15.2%	40.69	48.43	19.0%	62.79	103.15	64.28%	62.79	66.85	6.47%
14.	13,000	43.26	49.57	14.6%	43.26	50.96	17.8%	66.85	109.16	63.29%	66.85	70.91	6.07%
15.	14,000	45.83	52.27	14.1%	45.83	53.48	16.7%	70.91	115.17	62.41%	70.91	74.97	5.73%
16.	15,000	48.40	54.97	13.6%	48.40	56.01	15.7%	74.97	121.18	61.63%	74.97	79.03	5.42%
17.	20,000	61.24	68.46	11.8%	61.24	68.63	12.1%	95.27	151.21	58.72%	95.27	99.33	4.26%
18.	25,000	74.09	81.95	10.6%	74.09	81.26	9.7%	115.57	181.25	56.83%	115.57	119.63	3.51%
19.	Average Residential Consumption	9,700	9,700		9,700	9,700		6,800	6,800		6,800	6,800	
20.	Average Residential Bill	\$34.78	\$40.67	16.9%	\$34.78	\$42.62	22.5%	\$41.68	\$71.92	72.56%	\$41.68	\$45.74	9.74%
21.	Increase In Average Bill		\$ 5.89			\$ 7.84			\$ 30.24			\$ 4.06	
Rate Information													
5/8" Minimum Rate		\$12.43	\$14.50	16.7%	\$12.43	\$18.13	45.9%	\$18.13	\$31.07	71.37%	\$18.13	\$18.13	0.00%
1st Block Rate		\$0.256900	\$0.269800	5.0%	\$0.256900	\$0.252500	-1.7%	\$0.406000	\$0.600700	47.96%	\$0.406000	\$0.406000	0.00%

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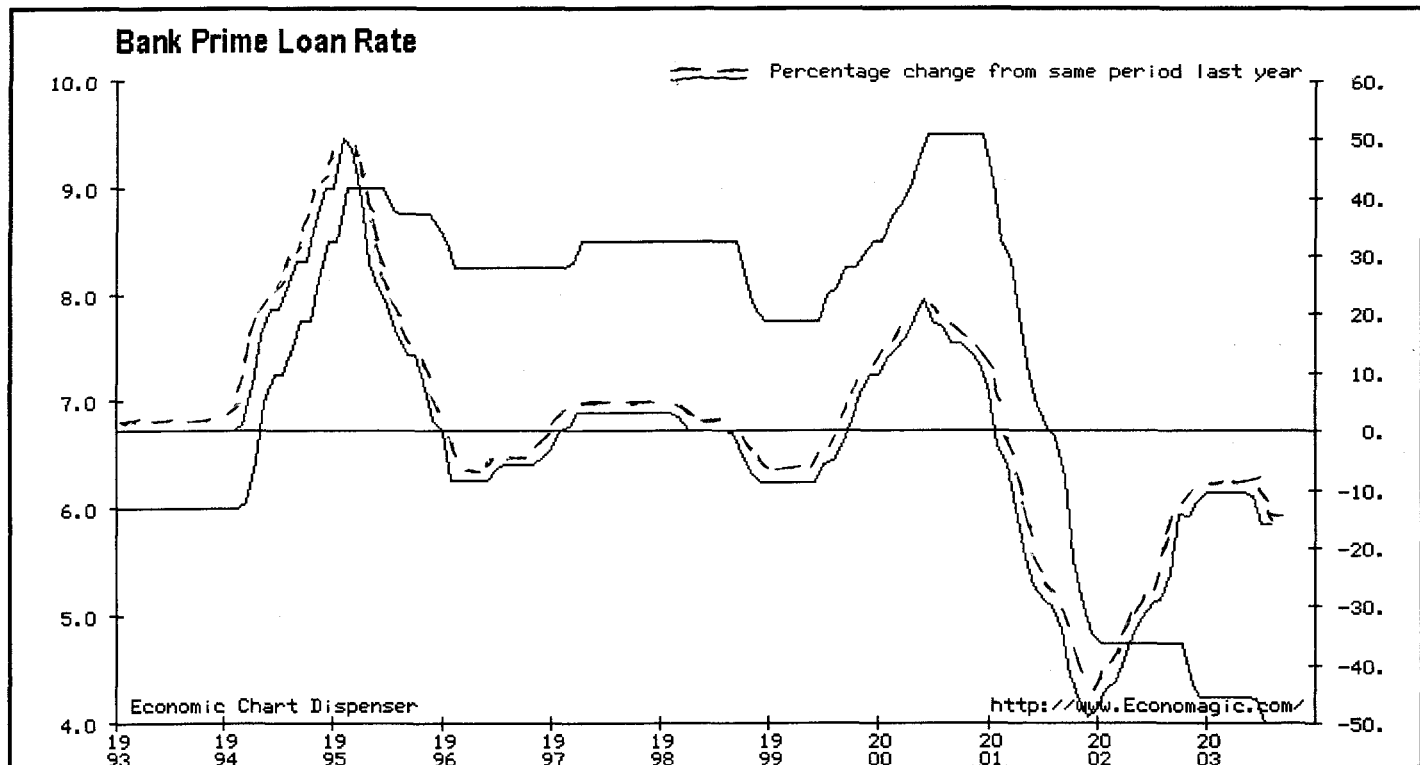
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Gif width 700

***ARIZONA WATER COMPANY***



**Docket No. W-1445A-02-0619**

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**2002 RATE HEARING EXHIBIT NO. \_\_\_\_**

**For Test Year Ending 12/31/01**

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**PREPARED  
REJOINDER TESTIMONY & EXHIBITS  
OF  
Thomas M. Zepp**

---



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8 **BEFORE THE ARIZONA CORPORATION COMMISSION**  
9

10 IN THE MATTER OF THE APPLICATION  
OF ARIZONA WATER COMPANY, AN  
11 ARIZONA CORPORATION, FOR  
ADJUSTMENTS TO ITS RATES AND  
12 CHARGES FOR UTILITY SERVICE  
FURNISHED BY ITS EASTERN GROUP  
13 AND FOR CERTAIN RELATED  
APPROVALS.

Docket No. W-01445A-02-0619

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19 **REJOINDER TESTIMONY OF THOMAS M. ZEPP**  
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1 **I. INTRODUCTION, SUMMARY AND CONCLUSIONS**

2 **Q. PLEASE STATE YOUR NAME.**

3 A. Thomas M. Zepp.

4 **Q. DID YOU PREPARE DIRECT TESTIMONY ON BEHALF OF ARIZONA**  
5 **WATER IN THIS CASE?**

6 A. Yes.

7 **Q. WHAT IS THE PURPOSE OF THIS TESTIMONY?**

8 A. Arizona Water Company ("Arizona Water" or "the Company") asked me to review and to  
9 respond where I thought it to be appropriate to the September 3, 2003 surrebuttal  
10 testimonies of Mr. Joel M. Reiker and Mr. William A. Rigsby.

11 **Q. HOW IS YOUR TESTIMONY ORGANIZED?**

12 A. In this section of my testimony, I summarize my conclusions. In Section II, I respond to  
13 Mr. Rigsby. In Section III, I respond to Mr. Reiker.

14 **Q. DO YOU SPONSOR ANY TABLES AND EXHIBITS TO ACCOMPANY THIS**  
15 **REJOINDER TESTIMONY?**

16 A. Yes. I present four Rejoinder Tables identified as TMZ-RJ1, TMZ-RJ2, TMZ-RJ3,  
17 TMZ-RJ5 and one document identified as TMZ-RJ4.

18 **A. OVERVIEW OF KEY POINTS.**

19 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

20 A. The two primary issues in this proceeding are the cost of equity of publicly-traded water  
21 utilities and the magnitude of the equity risk premium above that benchmark equity cost  
22 estimate that is required to provide Arizona Water a fair rate of return on equity. I provide  
23  
24  
25  
26

1 rejoinder testimony to the rebuttal testimony submitted by Mr. Rigsby and Mr. Reiker on  
2 these two issues.

3  
4 **1. Costs of equity are higher today than when Staff and RUCO prepared**  
5 **direct testimony.**

6 Costs of equity are higher today than when Mr. Rigsby and Mr. Reiker prepared  
7 their equity cost estimates, but they have not increased their recommended ROEs. Since  
8 the time Mr. Rigsby and Mr. Reiker filed their direct testimonies, the average of 5-year, 7-  
9 year and 10-year Treasury rates relied upon by Mr. Reiker to prepare his equity cost  
10 estimates has increased by 70 basis points. A consensus of Blue Chip forecasts of the  
11 intermediate-term Treasury rates that will be prevailing when the ACC authorizes new  
12 tariffs for the Company are another 55 basis points higher than current rates. I updated  
13 my initial equity cost estimates in my August rebuttal testimony. In their surrebuttal  
14 testimonies, neither Mr. Reiker nor Mr. Rigsby updated his recommended equity cost to  
15 reflect this substantial increase in the basic cost of credit. Also, they ignored forecasts  
16 that show interest rates are expected to be even higher when new tariffs are put in place.  
17 Obviously, the cost of equity for a typical water utility is higher now than when they  
18 prepared their estimates.  
19  
20

21 **2. Authorized, Realized and Forecasted ROEs provide useful indications**  
22 **of the benchmark cost of equity for water utilities.**

23 Mr. Rigsby and Mr. Reiker deny the usefulness of my Rebuttal Tables 1 and 2 in  
24 which I show authorized ROEs, earned ROEs and *Value Line* projections of ROEs. Mr.  
25 Meek provides similar data in his testimony. I respond to Mr. Rigsby and point out that  
26

1 once *Value Line* forecasts are re-stated on a mid-period basis, the average of forecasted  
2 ROEs for his sample is 11.1% for 2004 and 12.2% for the longer-period forecasted by  
3 *Value Line*. Those forecasts of ROEs are more relevant to determine the benchmark cost  
4 of equity than the 9.0% to 9.5% he says should be considered. I also respond to Mr.  
5 Reiker regarding the relevance of Rebuttal Tables 1 and 2. The U. S. Supreme Court has  
6 established three tests of a reasonable rate of return. One of those is that the return to the  
7 equity owner should be commensurate with returns for comparable risk companies.  
8 Contrary to his claims, Rebuttal Tables 1 and 2 provide evidence about such comparable  
9 returns. Mr. Reiker claims such returns do not reflect the cost of equity because market-  
10 to-book ratios for the sample water utilities are above 1. He is wrong. Mr. Thornton of  
11 the ACC staff and I have both provided long lists of reasons market-to-book ratios might  
12 be above 1.0 when a water utility is earning no more than its cost of equity.  
13  
14

15 **3. My restatements of Staff and RUCO DCF analyses are reasonable and**  
16 **more appropriate than their original estimates.**

17 Mr. Rigsby and Mr. Reiker also disagree with my restatements of their DCF  
18 analyses. I have already addressed Mr. Rigsby's comments and Mr. Reiker's response to  
19 my restatement of his constant growth DCF model in my rebuttal testimony and do not  
20 repeat those comments again in this rejoinder testimony. I do, however, respond to Mr.  
21 Reiker's contention that it is inappropriate to include the second stage of growth that I  
22 inserted in his multi-stage DCF model. Dr. Myron Gordon, the father of the DCF model,  
23 reviewed my DCF approach in another proceeding where the growth issues were  
24  
25  
26

1 analogous to this one. I provide an exhibit filed in that case in which Dr. Gordon  
2 concludes the restatement of Mr. Reiker's model is appropriate.

3  
4 **4. Forecasted interest rates provide more relevant equity cost estimates  
5 than do current interest rates.**

6 I have already addressed reasons forecasted interest rates and the zero-beta version  
7 of the CAPM are appropriate in my rebuttal testimony. I do not re-address the reasons  
8 forecasts of interest rates should be adopted. I do, however, respond to Mr. Reiker's  
9 contention that the use of adjusted betas eliminates the bias in equity cost estimates for  
10 low beta stocks indicated by the zero-beta version of the CAPM. I point out that Fischer  
11 Black, one of the pioneers who tested the CAPM, knew about the appropriateness of  
12 adjusting betas, but still found the bias in low beta stocks in his 1993 study. Black also  
13 offers a number of reasons to expect the zero-beta model is more appropriate than the  
14 original CAPM.  
15

16  
17 **5. Smaller water utilities are more risky than large ones.**

18 Mr. Rigsby and Mr. Reiker's continue to deny that smaller water utilities, such as  
19 Arizona Water, require a risk premium above the benchmark cost of equity. The keystone  
20 supporting their denial of the needed risk premium for Arizona Water is the Wong article  
21 that I rebutted with publication of my article in *The Quarterly Review of Economics and*  
22 *Finance* and which I discussed in my rebuttal testimony. Mr. Rigsby reserves judgment  
23 about the article but is unwilling to recommend a risk premium for Arizona Water. It is  
24  
25  
26



1 inappropriate to delay giving Arizona Water the risk premium it requires until others have  
2 attempted to rebut my article.

3  
4 **6. Mr. Reiker's elaborate, technical arguments are trivial and do not  
salvage the Wong paper.**

5  
6 Mr. Reiker, however, offers a number of technical arguments in an attempt to  
7 rebut my article. Below, I respond to each of his technical arguments and show they have  
8 no merit. In an attempt to challenge my article, he criticizes my beta estimates for the  
9 small water utilities based on four technical, but trivial, reasons. I explain why his reasons  
10 are trivial and compare his alternative beta estimates to mine in Rejoinder Table 3. His  
11 beta estimates are about the same, or slightly higher, than mine. His criticisms are nothing  
12 but an attempt to confuse the record and get the ACC to question the quality of my  
13 analysis. There is nothing of substance in his criticism of my analysis.

14  
15 As part of my rejoinder testimony, I revisited the Wong paper and found that even  
16 the Wong paper supports a conclusion that smaller utilities have higher equity costs than  
17 larger ones. Wong presents beta estimates for two periods in her Table 2. When monthly  
18 returns are used to estimate betas, her Table 2 shows that in one of the two reported  
19 periods, betas (equity costs) increase as size decreases. Her Table 2 does not show the  
20 same relationship between beta and size for the other period. But, her Table 3 shows that,  
21 during that period, equity costs increase as size decreases because there is a significant (at  
22 the 10% level) size effect. Thus, my article and a more complete analysis of the Wong  
23 data show that small utilities require higher equity costs than larger utilities. The linchpin  
24  
25  
26

1 in Mr. Reiker's and Mr. Rigsby's support for denying Arizona Water its required risk  
2 premium is gone.

3  
4 **7. Baa rates provide more meaningful risk premium estimates of equity  
costs than 10-year Treasury rates.**

5  
6 I also respond to Mr. Reiker's contention that risk premium estimates based on a  
7 comparison of equity costs and corporate bond rates is not meaningful and that risk  
8 comparisons should be based on comparisons of equity costs to default-free government  
9 bonds. I show that for the 1982-2002 period considered in the analysis I presented in  
10 Table 23, Baa corporate bonds provided a better explanation of equity costs than did 10-  
11 year Treasury bonds. And, for the most recent period, the Baa rates provide a much better  
12 explanation. These results are not in conflict with Baa bonds having default risk, but  
13 show that the default risk must be relatively stable or the 10-year Treasury bonds would  
14 have done a better job of explaining equity costs. My analysis reinforces my conclusion  
15 that Arizona Water's recent Series K bond issue supports a risk premium for the Company  
16 of at least 37 to 49 basis points. Mr. Reiker's contention that default risk invalidates such  
17 an inference is in conflict with my regression results.  
18  
19

20 **B. SPECIFIC CONCLUSIONS.**

21  
22 **Q. WHAT ARE YOUR SPECIFIC CONCLUSIONS:**

23 **A.** My specific conclusions are:

24 1. My Rebuttal Tables 1 and 2 provide useful indications of the cost of equity. The  
25 *Hope* and *Bluefield* U. S. Supreme Court decisions require the ACC to provide a return to  
26 Arizona Water that is commensurate with returns on investments in other enterprises  
having corresponding risks. Because Arizona Water is more risky, it requires a higher  
return.

1  
2 2. The cost of Arizona Water's Series K bond issue supports a risk premium for  
3 Arizona Water of no less than 37 to 49 basis points.

4 3. Notwithstanding Baa corporate bonds having default risk, evidence I present  
5 shows risk premium estimates above Baa bond rates are preferred to risk premium  
6 estimates above 10-year Treasury rates at this time.

7 4. Mr. Reiker and Mr. Rigsby did not update their equity cost estimates. Since the  
8 time they prepared those equity cost estimates, the yields on intermediate Treasury bond  
9 rates have increased by 70 basis points. This increase in the basic cost of credit indicates  
10 the cost of equity estimates for their respective samples are too low.

11 5. Mr. Reiker's quotations from various publications do not invalidate my conclusion  
12 that there are other systematic risks, such as distress and size, that are priced by investors.

13 6. Both evidence in Wong article and my article commenting on the Wong article  
14 support a conclusion that small utilities require higher equity returns than larger utilities.

15 7. ACC Staff's estimates of betas corroborate my finding that beta estimates for  
16 small utilities are closer to 1.0 if annual data are used to make the estimates.

17 8. Evidence Wong reports in her tables does not support the conclusions she writes.  
18 A closer examination of the evidence in her tables shows her statistical results support  
19 small utilities having higher equity costs than larger ones (either through differences in  
20 beta or a small firm effect).

21 9. Mr. Reiker's numerous technical comments do not invalidate the substance of the  
22 findings in my article, that small utilities have higher equity costs than large utilities.

23 10. Contrary to Mr. Reiker's statement at page 12, my article does contradict Ms.  
24 Wong's conclusions. If anything, her tables also contradict her written conclusions.

25 11. In discussing my paired difference test, Mr. Reiker assumes pairs of equity costs in  
26 different years have no relationship to the financial conditions present in those years.  
Such an assumption makes no sense and thus my paired difference test is correct and his  
approach is wrong.

2. Staff's use of intermediate-term Treasury rates and *Value Line* betas does not  
eliminate the negative bias in equity costs for utilities with betas less than 1.0. My  
practical solution of using long-term Treasury bond rates in the CAPM reduces the  
negative bias and is preferred to both Mr. Reiker's and Mr. Rigsby's CAPM approaches.

13. Myron Gordon agreed with my multi-stage DCF model in which I assumed investors expect higher future dividend growth in subsequent periods when dividends are currently growing slower than earnings. It is appropriate to insert such a second stage growth period in Mr. Reiker's analysis to reflect such investor expectations.

14. Estimates of future ROEs expected for water utilities in Mr. Rigsby's sample is 11.1% for 2004 and 12.2% for future years, not the 9.0% to 9.5% ROEs he states in at least two places in his testimony.

15. Neither Mr. Reiker nor Mr. Rigsby provide a basis to deny the 100 to 150 basis point risk premium I estimate is appropriate for Arizona Water.

16. My updated equity costs and my restatements of Mr. Reiker's and Mr. Rigsby's equity costs that were reported in my rebuttal testimony provide the best estimates of the benchmark cost of equity and Arizona Water's cost of equity.

## **II. RESPONSE TO MR. RIGSBY**

**A. Arizona Water's series K bond issue provides powerful evidence the Company requires at least a 37 to 49 basis point risk premium.**

**Q. PLEASE TURN TO YOUR RESPONSE TO MR. RIGSBY. AT PAGE 27 MR. RIGSBY SAYS THAT ANY ARGUMENTS RELATED TO THE SERIES K BOND ISSUE ARE MOOT. DO YOU AGREE?**

A. The series K bond issue provides powerful evidence that Arizona Water Company requires a risk premium no less than 37 to 49 basis points above the cost of equity found to be reasonable for Mr. Reiker's and Mr. Rigsby's publicly traded water utilities samples. I addressed this issue above. Mr. Rigsby ignores this important information when he argues Arizona Water requires no risk premium.

**B. Uncertainties with recovery of arsenic-related costs increase risk and the required ROE for Arizona Water**

1 Q. MR. RIGSBY ALSO DISREGARDS COMPANY TESTIMONY THAT  
2 SUBSTANTIAL UNCERTAINTIES WITH RECOVERY OF ARSENIC RELATED  
3 COSTS INCREASES THE COMPANY'S REQUIRED ROE BECAUSE THE ACC  
4 IS EXPECTED TO APPROVE AN ARSENIC RECOVERY MECHANISM. DO  
5 YOU HAVE A RESPONSE?

6  
7 A. Yes. His comment is it is "almost a near certainty" that some type of recovery mechanism  
8 will be approved. But it is not a certainty and the form of the ACRM is not known at this  
9 time. It is possible that the ACRM that is ultimately approved will place substantial risk  
10 on the shoulders of the Company. As a result, Arizona Water's ROE should be increased  
11 to reflect these uncertainties.  
12

13 C. My equity cost estimates are consistent with Mr. Meek's testimony.  
14

15 Q. AT PAGE 29, MR. RIGSBY STATES THAT BASED ON MR. MEEK'S  
16 TESTIMONY, YOUR TESTIMONY SHOULD BE DISREGARDED. IS YOUR  
17 TESTIMONY INCONSISTENT WITH MR. MEEK'S TESTIMONY?

18 A. No, it is not. I read Mr. Meek's testimony and found it dovetailed nicely with mine.  
19 Testimony built upon an appropriate application of "textbook theories" (as Mr. Rigsby  
20 characterizes my approach) should not be inconsistent with a knowledgeable investor's  
21 observations about what it takes for Arizona Water to attract capital, to have financial  
22 integrity and to earn a return comparable to other utilities of similar risk. As I noted in my  
23 rebuttal testimony, Mr. Rigsby's problem is that his approach is not an appropriate  
24 application of those "textbook theories." If it had been, his recommended ROE would not  
25 have seriously departed from the ROE Mr. Meek concludes is reasonable.  
26

1 D. Value Line forecasts of ROEs for Mr. Rigsby's sample are 11.1% and 12.2%,  
2 not 9.0% and 9.5%.

3 Q. AT PAGE 31, MR. RIGSBY REPORTS FORECASTED ROES FOR HIS THREE  
4 COMPANIES. AND AT PAGE 32, HE CRITICIZES YOUR REBUTTAL TABLE

5 1. DO YOU HAVE ANY OBSERVATIONS ABOUT HIS COMMENTS?

6 A. Yes, at page 31, he reports forecasts of future ROEs for the three utilities in his sample for  
7 the year 2004. I have two observations. First, the cost of equity is a measure of what the  
8 ROE should be for many years, not just next year. Value Line's most recent forecast of  
9 ROEs for the longer term for the three companies in his sample are 10% for American  
10 States, 10.5% for California Water, and 15% for Philadelphia Suburban, for an unadjusted  
11 average ROE of 11.8%, a full percentage point higher than the forecasted average ROE  
12 for 2004 of 10.8%. The expected ROE of 11.8% is also higher than the averages of  
13 authorized and actual ROEs I report in my Rebuttal Table 1 of 10.93% and 10.64%.  
14 Second, Value Line reports ROEs on an end of period basis, not a beginning of period or  
15 mid-year basis. Value Line reports an average of growth in retained earnings of 5.7% for  
16 the companies in his sample. Adjusting the average ROEs based on an end-of period  
17 basis to a mid-period basis, the indicated comparable return is 12.2% for the longer term  
18 and 11.1% for 2004. Both the corrected longer-term average and the corrected average  
19 for 2004 are substantially higher than Mr. Rigsby's recommended ROE of 9.18%.

20 E. The changes in risk mentioned by Mr. Rigsby are small do not offset Arizona  
21 Water's required risk premium of 100 to 150 basis points.

1 Q. AT PAGE 36-37, MR. RIGSBY STATES ARIZONA WATER FACES LESS RISK  
2 NOW THAN WHEN IT FILED. DID MR. RIGSBY PROPOSE A RISK  
3 PREMIUM BEFORE THESE PRESUMED CHANGES IN RISK?  
4

5 A. No.

6 Q. DOES ARIZONA WATER STILL REQUIRE A RISK PREMIUM ABOVE THE  
7 COST OF EQUITY ESTIMATED FOR HIS SAMPLE OF WATER UTILITIES?  
8

9 A. Yes, it does. Arizona Water faces more risk for a number of reasons, not the least of  
10 which is it is much smaller than utilities in his comparable sample. Also, there is clear  
11 evidence the Company requires at least a 37 to 49 basis point risk premium because it was  
12 unable to obtain debt at a cost as low as the A-rated and AA-rated water utilities in his  
13 sample and Mr. Reiker's sample. Mr. Rigsby writes the answer to this question as if the  
14 ACC had authorized a risk premium for Arizona Water in the past. Such a premium has  
15 not yet been authorized but should be authorized based on the evidence I presented in this  
16 case.  
17

18 **III. RESPONSES TO MR. REIKER**

19 A. My Rebuttal Table 2 provides useful indications of equity costs.  
20

21 Q. AT PAGES 1-2, MR. REIKER STATES YOUR REBUTTAL TABLE 2 DOES NOT  
22 PROVIDE USEFUL INDICATIONS OF THE COST OF EQUITY FOR HIS  
23 SAMPLE OF WATER UTILITES. DO YOU HAVE A RESPONSE?

24 A. Yes. Rebuttal Table 2 provides information that Mr. Reiker does not want the ACC to  
25 know about. It is information that shows the companies in his water utilities sample have  
26

1 costs of equity that are higher than he has been telling the ACC will provide a fair rate of  
2 return on equity ("ROE") for Arizona Water. Rebuttal Table 2 shows that if one looks at  
3 either ROEs earned by the water utilities in his "comparable risk" sample or at ROEs that  
4 have been authorized, those utilities must have higher costs of equity than he is  
5 recommending.  
6

7 Regulatory commissions take evidence on the cost of equity. They examine  
8 results of DCF models, CAPM models, and risk premium models and consider other  
9 information that experts provide at hearings. Based on all of that information, they set  
10 authorized ROEs. I explained in my direct testimony at page 38, that the FERC has  
11 adopted such state regulatory commission determinations of authorized ROEs to  
12 determine risk premium estimates of the cost of equity. Mr. Reiker is wrong when he says  
13 such useful information should be disregarded. In effect he is saying the Staff at the  
14 FERC is wrong and that regulatory commissions in other states are not authorizing (on  
15 average) ROEs that balance the interests of ratepayers and investors.  
16

17 **Q. HOW DOES HE DEFEND SUCH A POSITION?**

18 A. He defends it by arguing the ROEs being earned and ROEs being authorized must exceed  
19 the cost of equity if the water utilities have market-to-book ratios of 2.2 and gas utilities  
20 have market to book ratios of 1.7. In my direct testimony, at pages 30-31, I provided a  
21 number of reasons market-to-book ratios for water utilities could be substantially above  
22 1.0 and the utilities would be earning no more than their costs of equity. In that testimony  
23 I presented six reasons market-to-book ratios for utilities could be above 1.0 that were  
24 listed by Mr. John Thornton, another employee of the ACC Staff, in his testimony before  
25  
26



1 the Oregon PUC. I also presented three other specific reasons market-to-book ratios are  
2 expected to be above 1.0 for water utilities. That testimony stands unrebutted by Mr.  
3 Reiker. Instead of addressing the points I raised, he presents a quote by a professor who  
4 apparently is not familiar with the real world. Market-to-book ratios reported by C.A.  
5 *Turner Utility Reports* have been above 1.0 for water and gas utilities since at least 1991  
6 (that's all of the C.A. Turner books I have).  
7

8 The evidence presented in my Rebuttal Table 2 is powerful evidence that his  
9 recommendation and Mr. Rigsby's recommendation of equity costs close to 9% are not  
10 fair rates of return and are below the cost of equity.  
11

12 **Q. IS THERE ANOTHER REASON THE EVIDENCE IN REBUTTAL TABLE 2 IS**  
13 **RELEVANT TO A DETERMINATION OF THE APPROPRIATE ROE OF**  
14 **ARIZONA WATER?**

15 A. Yes. In both the *Bluefield* and the *Hope* decisions, the U. S. Supreme Court found that a  
16 fair rate of return must pass three tests. Those tests are a capital attraction test, a financial  
17 integrity test and a comparable earnings test. Returns being authorized and earned by  
18 other water utilities of similar risk are such comparable returns. The returns reported in  
19 Rebuttal Table 2 provide evidence about that comparable return. While Arizona Water is  
20 more risky than the average utility in Mr. Reiker's sample, those earned and authorized  
21 ROEs provide a useful benchmark that shows a ROE that is fair for Arizona Water is no  
22 lower than those benchmark ROEs. Market-to-book ratios notwithstanding, a  
23 recommendation of just above 9% does not pass the U. S. Supreme Court tests of a fair  
24 rate of return.  
25  
26

1           B.    Notwithstanding default risk, Baa corporate bonds have a stronger  
2               correlation with equity costs than do 10-year Treasury bonds at this time.

3       Q.    AT PAGE 2, MR. REIKER SAYS CORPORATE BOND COSTS CANNOT BE  
4           MEANINGFULLY COMPARED TO EQUITY COSTS. IS HE CORRECT?

5       A.    No. Mr. Reiker says bonds include default risk that is diversifiable and thus there can be  
6           no meaningful comparison. He contends risk comparisons should be to default-free  
7           government bonds. His statement has bearing on two important issue is this case. One is  
8           whether Arizona Water's equity cost is at least 37 to 49 basis points above the cost of  
9           equity for A-rated and AA-rated water utilities. The other is whether the risk premium  
10          estimates I presented in Table 22, 23 and 24 (in my direct testimony) and updated in  
11          Update Tables 22, 23 and 24 (in Tab A of my rebuttal testimony) are meaningful.

12  
13  
14               1.    Baa rates provide better forecasts of equity costs than do 10-year  
15               Treasury rates.

16       Q.    PLEASE BEGIN WITH THE QUESTION OF WHETHER THE USE OF  
17           CORPORATE BOND RATES OR TREASURY RATES ARE PREFERRED  
18           WHEN MAKING RISK PREMIUM ESTIMATES OF THE COST OF EQUITY.  
19           WHAT IS THE ISSUE OF CONCERN?

20       A.    The issue is which measure of interest rates provides the most reliable estimate of the cost  
21           of equity. In cases five or six years ago, I usually conducted risk premium analyses using  
22           government bonds instead of corporate bonds. But, in the last several years, there has  
23           been a strong demand for Treasury securities that has little to do with them being the  
24           "default-free" bond of the textbooks. In part, government bonds have been demanded  
25

1 because investors anticipated the government will be issuing fewer bonds and thus  
2 institutions that have requirements for certain percentages of government bonds in their  
3 portfolios have bid up the government bond prices. Also, with the drastic drop in the  
4 stock market, the slow recovery from recession and other investors concerns, there has  
5 been a "flight to quality" which has also bid up demand to unusual levels.

6  
7 Rejoinder Table 1 shows the spread between Baa corporate bond rates and 10-year  
8 Treasury rates during the last two years is 50% higher than the average spread from 1982  
9 to 1998. And, even though forecasters predict that spread will be moving back toward  
10 levels experienced in the past, the higher relative demand for Treasuries is expected to  
11 continue into the immediate future. For purposes of constructing a risk premium analysis  
12 based on historical data from 1982 to 2002, the higher yield spread today and forecasted  
13 for the future creates a problem. If the risk premium is based on an average of data for the  
14 1982 to 1998 period, for example, that risk premium will be too small to combine with  
15 current Treasury rates. Thus, combining current or forecasted rates for Treasuries with such  
16 past realized premiums understates the cost of equity.

17  
18 **Q. DO YOU HAVE ANY EVIDENCE THAT Baa RATES ARE PREFERRED TO**  
19 **TREASURY RATES?**

20 **A.** Yes. That evidence is presented in Rejoinder Table 2. I used updated data for Table 23  
21 presented in my direct testimony as the measure of the cost of equity and ran statistical  
22 regressions to see if 10-year Treasury bond rates or Baa corporate bond rates provided the  
23 better explanation of the dependent variable (equity costs) considered in each analysis.

24  
25 **Q. WHAT DID YOU FIND?**  
26

1 A. I found that for the entire period and for the most recent period, Baa corporate bond rates  
2 provide a better explanation of equity costs than do 10-year Treasury rates. During the  
3 full 1982-2002 period, both measures of interest rates provide good explanations of equity  
4 costs, but Baa rates do a better job of explaining the level of equity costs ( $R^2 = 84.5\%$ )  
5 than do 10-year Treasury rates ( $R^2 = 82.0\%$ ). As expected – based on the known “flight  
6 to quality,” in the most recent four year period, the relative performance of 10-year  
7 Treasuries ( $R^2 = 8.9\%$ ) compared to Baa rates ( $R^2 = 18.3\%$ ) was much lower than in the  
8 full 1982-2002 period. Though both measures of interest rates still provided statistically  
9 significant explanations of the cost of equity, Baa rates are clearly preferred.

11 **Q. WHAT DOES YOUR STUDY TELL US ABOUT A “MEANINGFUL  
12 COMPARISON” OF CORPORATE BONDS AND EQUITY COSTS?**

14 A. It tells us that, contrary to Mr. Reiker’s contention at page 2 and 3, that comparisons of  
15 Baa bond rates and equity cost is meaningful. And, it tells us that, at least in the current  
16 period where there has been a “flight to quality”, that Baa rates are preferred to Treasury  
17 rates when making risk premium estimates.

19 **2. Notwithstanding default risk, Arizona Water’s series K bond issue  
20 supports a risk premium of no less than 37 to 49 basis points.**

21 **Q. DOES YOUR STUDY ALSO CAST SOME LIGHT ON MR. REIKER’S CLAIM  
22 THAT THE PRESENCE OF DEFAULT RISK IN CORPORATE BONDS MAKES  
23 YOUR ANALYSIS AT PAGE 24 AND 25 OF YOUR DIRECT INVALID?**

24 A. Yes. At page 24 and 25 I pointed out that Arizona Water was unable to issue its series K  
25 bonds at a rate as low as A-rated bonds. And I noted that information supported a risk  
26

1 premium for Arizona Water of at least 37 to 49 basis points above the benchmark costs of  
2 equity made with Mr. Reiker's sample. At page 2 of his rebuttal, Mr. Reiker says the  
3 yield on corporate bonds cannot be meaningfully compared to the cost of equity because  
4 corporate bonds contain some default risk and such default risk is diversifiable. I do not  
5 take issue with the fact that corporate bonds contain default risk. But, based on the results  
6 in Rejoinder Table 2, default risk for utilities appears to be fairly stable. If that were not  
7 the case, Baa rates would not outperform the Treasury rates that have no default risk.  
8

9 **Q. PLEASE REVISE THE STATEMENT YOU MADE AT PAGE 24-25 OF YOUR**  
10 **REBUTTAL THAT MR. RIEKER QUOTES AT PAGE 2 TO TAKE INTO**  
11 **ACCOUNT HIS COMMENT ABOUT DEFAULT RISK.**

12 **A.** Certainly. The modified statement is:

13  
14 If all water utilities have equity costs that are the same margin above the  
15 respective costs of debt and bonds issued by water utilities have similar  
16 default risks, Arizona Water Company requires a risk premium that is at  
least 37 to 49 basis points above the benchmark costs of equity estimated for  
the water utilities sample.

17 The evidence I present in Rejoinder Table 2 shows that default risks of utility bonds must  
18 be relatively stable or the Baa rates would not provide a stronger explanation of equity  
19 costs than is provided by default free Treasury rates. Mr. Reiker makes an interesting  
20 point about default risk, but if default risk is reasonably stable Arizona Water's cost of  
21 issuing the series K bonds supports a risk premium of at least 37 to 49 basis points above  
22 benchmark costs of equity.  
23  
24  
25  
26

1 C. If Arizona Water has a greater chance for default than water utilities in his  
2 sample, as Mr. Reiker suggests, Arizona Water must also have a higher  
3 equity cost.

4 Q. AT PAGES 3-5, MR. REIKER RESPONDS TO YOUR TESTIMONY AT PAGES  
5 28-29 OF YOUR REBUTTAL TESTIMONY WHERE YOU POINT OUT  
6 PROBLEMS WITH HIS ASSESSMENT THAT ARIZONA WATER IS LESS  
7 RISKY BECAUSE IT HAS LESS FINANCIAL RISK. DO YOU HAVE A  
8 RESPONSE?

9 A. Yes. First, he suggests Arizona Water has a greater chance for default than the utilities in  
10 his water utilities sample. The primary risk any utility faces is regulatory risk. In effect,  
11 Mr. Reiker assumes the Arizona Corporation Commission has caused such added risk. If  
12 actions taken by the ACC has caused such added risk for bonds, those actions have also  
13 caused an increase in equity costs. Mr. Reiker's statement takes him full circle back to  
14 Arizona Water having higher business risk.

15  
16 Second, Mr. Reiker presents a quotation that implies the higher cost of a private  
17 placement are partly the result of Arizona Water passing along part of the cost-savings  
18 from the private issue to the institution that bought the bonds. This statement applies to  
19 utilities that have the choice of going public or making private placements, not to a small  
20 water utility. Arizona Water required many months to even find an institution that would  
21 buy the bonds. And the Company issued the series K bonds at the lowest rate it could get.  
22 I doubt Arizona Water could make a public bond issue offering. But even if it could, the  
23 high cost of issuing such a bond series would be costs that would be recovered from  
24 ratepayers. Arizona Water's ratepayers are better off with the private placement. His  
25  
26

1 comment about the spread between corporate bonds and privately placed bonds does not  
2 explain away the fact that Arizona Water was unable to issue bonds at a rate as low as A-  
3 rated or AA-rated bonds.  
4

5 D. There are no data for Arizona Water to conduct the unlevered beta analysis  
6 Mr. Reiker applies to Arizona Water.

7 1. An unlevered beta analysis requires market data that do not exist for  
8 Arizona Water.

9 Q. MR. REIKER ALSO RESPONDED TO YOUR POINT ABOUT HIM USING THE  
10 WRONG MEASURE OF LEVERAGE. DID HE ADDRESS THE CRITICAL  
11 POINT YOU MADE?

12 A. No. Mr. Reiker agrees that Ibbotson Associates uses a market measure of leverage to  
13 calculate unlevered betas. Mr. Reiker could compute such market value equity ratios for  
14 his sample water utilities because the stocks of those utilities are publicly traded and there  
15 are prices to determine market values of equity. The critical point Mr. Reiker does not  
16 address in response to my testimony is that there is no market value for Arizona Water  
17 equity. Mr. Reiker applies a sophisticated analysis that cannot be done without the data  
18 required to make that analysis. Mr. Reiker says I ignore the "simple fact" that the sample  
19 water utilities are more leveraged than Arizona Water. The "simple fact" is that Mr.  
20 Reiker does not know if Arizona Water is more leveraged and cannot know if Arizona  
21 Water is more leveraged because he does not know the market value of Arizona Water  
22 equity. His sophisticated analysis of differences in financial risk must be ignored because  
23 Arizona Water is not publicly traded.  
24  
25  
26

1                   2.     **Mr. Reiker has assumed his answer by assuming Arizona Water has**  
2                   **the same level of business risk as other water utilities.**

3     **Q.     HOW DOES MR. REIKER RESPOND TO YOUR POINT THAT HE HAS**  
4           **ASSUMED HIS ANSWER BY ASSUMING ARIZONA WATER HAS THE SAME**  
5           **BUSINESS RISK AS OTHER WATER UTILITIES?**

6     A.     He provides a quotation from Reilly and Brown that does not dispute what I said. The  
7           primary risk faced by utilities is regulatory risk and that regulatory risk will vary from  
8           state to state. Thus, the *industry* referred to by Reilly and Brown would also differ by  
9           state. Mr. Reiker has no basis to assume the regulatory risks faced by the water utilities  
10          in his sample are more or less than the regulatory risks in Arizona. I have not read the  
11          full text of Reilly and Brown, but if Mr. Reiker has not taken the quotation out of context,  
12          I disagree with it. At a minimum, the size of the utility, as well as the uncertainty of  
13          income, determines the business risk of the utility.  
14

15  
16                   3.     **Other financial models conclude there are systematic risks, such as**  
17                   **distress and size, in addition to risk related to the market.**

18     **Q.     AT PAGE 5-7, HE PRESENTS PROBLEMS WITH THE FAMA-FRENCH**  
19           **MODEL. DID YOU APPLY THE FAMA-FRENCH MODEL TO MAKE EQUITY**  
20           **COSTS?**

21     A.     No. I presented it to show one of the models others have presented that show the basic  
22           CAPM is incomplete. There are many other models, to include the ones presented by  
23           Ibbotson Associates and the Arbitrage Pricing Model that show factors other than market  
24           returns are useful in explaining returns for stocks. As early as 1985, Professor William  
25  
26



1 Sharpe, one of the original developers of the basic CAPM, discussed a multiple factor  
2 CAPM in the third edition of his book *Investments*, at pages 176-179.

3 **Q. DOES HIS TESTIMONY AT PAGES 5-7 JUSTIFY EXCLUSIVE RELIANCE ON**  
4 **THE SIMPLE CAPM?**

5 **A.** No. He suggests there are data availability problems with estimating equity costs with the  
6 Fama-French model. But a lack of data to implement the model does not take away from  
7 the fact that there is more than one systematic risk of concern to investors.  
8

9 **E. The Wong article does not support denying Arizona Water its required risk**  
10 **premium.**

11 **Q. AT PAGE 7-13, HE RESPONDS TO CONCLUSIONS YOU REACH IN YOUR**  
12 **SOON TO BE PUBLISHED ARTICLE. DO YOU HAVE ANY RESPONSE TO**  
13 **HIM?**

14 **A.** Yes, I have several.

15 **1. Pooling data does not "manufacture" data points.**

16 **Q. MR. REIKER SAYS POOLING RETURN DATA CAUSES A PROBLEM. DOES**  
17 **IT?**

18 **A.** No. Rejoinder Table 3 shows annual beta estimates I made and annual beta estimates  
19 Staff made with and without pooling of the data. In all cases, the average of beta  
20 estimates are higher than the average of Value Line beta estimates for the three small  
21 water utilities.  
22  
23  
24

25 Mr. Reiker says pooling data amounts to "manufacturing data points". Mr. Reiker  
26

1 knows I did not manufacture data points. He has my work papers and knows exactly what  
2 I did. I assumed the three utilities had the same true, but unknown, beta, combined the  
3 data and ran one regression instead of three. Contrary to what Mr. Reiker suggests,  
4 pooling of the data would not necessarily increase statistical significance if my  
5 assumption about all of the utilities having the same beta were wrong.  
6

7 **2. Statistical significance levels of .05 are not generally realistic when**  
8 **estimating betas.**

9 **Q. AT PAGE 9, MR. REIKER SUGGESTS BETAS SHOULD BE STATISTICALLY**  
10 **SIGNIFICANT AT THE .05 LEVEL. IS SUCH A HIGH LEVEL OF**  
11 **SIGNIFICANCE COMMON WHEN BETAS ARE BEING ESTIMATED?**  
12

13 **A.** No. First, if portfolio theory is correct – that investors reduce risk by holding a portfolio  
14 of stocks instead of just one stock – estimating betas will seldom provide very high  $R^2$ s  
15 and thus low significance levels like .05. If betas could be estimated with a lot of  
16 confidence, investors would not need to diversify. Second, I know from past experience  
17 estimating betas for utilities that  $R^2$ s usually are small (and thus confidence in the beta  
18 estimates is low). With beta estimation, the goal is to make the best use of the  
19 information that is available and make the best estimate of the true, but unknown, beta.  
20 That is what I did when I pooled the data and ran the regression with an intercept dummy  
21 variable. I used my understanding of unique problems with making beta estimates that I  
22 learned at the Oregon PUC when I constructed a sample of 500,000 common stock  
23 observations to conduct research about CAPM.  
24  
25  
26

1                   3.     **Inclusion of dummy variables is a standard statistical technique that**  
2                   **allows the inclusion of more information in an analysis.**

3     **Q.     YOU MENTIONED YOU USED A DUMMY VARIABLE IN YOUR ANALYSIS.**  
4             **MR. REIKER CRITICIZES YOU FOR DOING THAT. PLEASE EXPLAIN.**

5     A.     I knew in advance of conducting my analysis that the price of SJW Corp common stock  
6             increased by a large amount when investors expected it to be purchased by American  
7             Water Works. In terms of CAPM, part of the change in price was an unsystematic return.  
8             Including the dummy variable allows this additional information to be recognized. Mr.  
9             Reiker says that when the dummy variable is not included in the regression, the  
10            significance level dropped. It should drop or there is no reason to include it in the  
11            analysis. What he did not say was that the regression estimate of beta stayed about the  
12            same. This is exactly what one would expect if the unusual return for SJW Corp was  
13            “unsystematic”. Including the dummy variable, however, is efficient because it takes  
14            known information into account. Mr. Reiker is wrong to suggest such information should  
15            be ignored.  
16              
17            

18                   4.     **Roll provides the basis for a one-tailed test.**

19  
20     **Q.     BASED ON AN ARTICLE PUBLISHED BY LEVHARI AND LEVY, MR. REIKER**  
21             **CRITICIZES YOUR USE OF A ONE-TAILED t-TEST. WHAT IS THE BASIS**  
22             **FOR YOUR CHOICE OF A ONE-TAILED TEST?**

23     A.     I relied upon a paper Professor Richard Roll of the University of California at Los  
24             Angeles wrote three years after the Levhari and Levy paper was published. Roll presents  
25             a theoretical basis for assuming that the beta is expected to be higher if annual instead of  
26

1 monthly or weekly data are used to make the estimates. Mr. Reiker is wrong.

2  
3 5. Mr. Reiker's four criticisms of my annual beta estimates are trivial  
4 and, if recognized, would not change the beta estimates in any  
significant way.

5 Q. PLEASE RESPOND TO MR. REIKER'S FOUR CRITICISMS OF YOUR  
6 ANNUAL BETA ESTIMATES AT PAGE 10.

7 A. Certainly. First, he criticizes the index I used to make the beta estimate. I agree that  
8 slight differences in beta estimates will occur if different indexes are used to make beta  
9 estimates. From my experience estimating betas, the differences in beta estimates  
10 resulting from using different indexes are small. Ms. Wong makes the same observation  
11 in her article. Rejoinder Table 3 shows beta estimates ACC Staff and I made with  
12 different indexes. As I understand Staff's estimates, the index they have used is similar to  
13 the one used by *Value Line*. There are differences in the beta estimates, but -- as expected  
14 -- they are not large and certainly do not explain a difference in betas as large as .31 (.78  
15 estimated with annual data versus .47 with weekly data). Mr. Reiker knew this first  
16 argument is trivial because he also had the beta estimates I report in Rejoinder Table 3.

17  
18  
19 Second, he criticizes me for using total returns while *Value Line* uses changes in  
20 prices. The Staff estimates I report in Rejoinder table 3 are based on changes in prices.  
21 Again, Mr. Reiker is trying to make a mountain out of a molehill. If anything, his  
22 argument goes against him. Based on Staff's estimates of betas made with annual changes  
23 in prices, the difference between average betas computed with either pooled data or as an  
24 average of the three beta estimates would be larger (.83 minus .47 or .87 minus .47) than I  
25 estimated with pooled annual total returns data.  
26

1 Third, he says a comparison cannot be made because I use pooled data to make my  
2 estimates. Rejoinder Table 3 shows that if I had made individual estimates of betas and  
3 then took an average, instead of computing the betas with pooled data, the average beta  
4 estimate would be larger and the difference between the average beta based on annual data  
5 and on weekly data would increase, not be smaller.

6 Fourth, he complains about me including a dummy variable to estimate the betas.  
7 I went back to the data I used to make the beta estimate for my article and ran the pooled  
8 regression without the dummy variable. The beta estimate increased from .78 to .83 --  
9 not much of a change. But I relied on the .78 beta because it incorporates more  
10 information.  
11

12  
13 6. Staff's beta analysis make Mr. Reiker's testimony unnecessarily  
14 technical and complicated. His beta estimates are not much different  
15 than mine.

16 Q. AT PAGES 10 TO 11, MR. REIKER DESCRIBES STAFF'S BETA ANALYSIS.  
17 DO YOU HAVE ANY COMMENTS ABOUT THAT TESTIMONY?

18 A. Yes, I have two comments. First, his focus is statistical significance when it should be on  
19 obtaining the best estimate of beta. Second, the Staff estimates of the beta for SJW Corp  
20 changed significantly when the dummy variable was not included in the regression. Little  
21 change occurred with the data I used: The adjusted beta estimate for SJW Corp was 1.12  
22 without the dummy variable and was .97 with the dummy variable. Possibly Staff made a  
23 mistake with the data they used to make their estimates. Given time constraints, I have  
24 been unable to explain why Staff did not find the small difference that I found with the  
25 data I used.  
26

1 Q. DID THE ANALYSIS MR. REIKER PROVIDES SUPPORT HIS CONCLUSION  
2 THAT "MEANINGFUL BETA ESTIMATES" CANNOT BE MADE WITH FIVE  
3 YEARS OF DATA?

4 A. No. I agree that individual beta estimates for the three small water utilities that were made  
5 with five years of data have small  $R^2$ s, but individual estimates of utility betas made with  
6 60 monthly returns also have small  $R^2$ s. Possibly Mr. Reiker has not spent much time  
7 estimating betas and thus he expected unrealistically high levels of significance, when that  
8 is not expected. The beta estimates I made with pooled annual data are actually more  
9 significant than I expected, based on my past experience making such estimates for other  
10 utilities.  
11  
12

13 7. Wong's written "findings" are not supported by data in her tables.  
14 Her tables actually support equity costs for small utilities being higher  
15 than for larger utilities.

16 Q. AT PAGE 12, MR. REIKER DISCUSSES THE WONG FINDINGS. DO YOU  
17 HAVE A RESPONSE TO WHAT HE SAID?

18 A. Yes. He says my article does nothing to contradict the results in the Wong study. I  
19 disagree. In my article, I pointed out that in one of two periods, Wong reported in her  
20 Table 2 that beta risk for utilities increased as size decreased. I recently observed (after  
21 finishing the article) that evidence in Ms. Wong's article also supports a small firm effect  
22 for the other period. In the second period, when Wong did not find betas increasing as  
23 firm size decreased, evidence in her Table 3 showed that there was a statistically  
24 significant (at the 10% level) small firm effect. That result is consistent with those who  
25 have speculated that the small firm effect is in fact the result of poor betas estimates.  
26

1 Ibbotson Associates find that when they estimate betas with annual data that beta  
2 estimates increase, and though the small firm effect does not go away, it is smaller than  
3 when betas are estimated with monthly data.

4 I do not disagree with Wong's quantitative estimates. What I disagree with is her  
5 interpretation of those statistical results. Wong ignored the results in her Table 2 and  
6 ignored the inference I have drawn by combining her results in Table 2 and Table 3 when  
7 she wrote the conclusion that Mr. Reiker quoted at page 60 of his direct testimony. I do  
8 not dispute her empirical findings but I certainly dispute the conclusions she draws from  
9 her statistical findings. I also did not dispute her finding about beta risk made with short  
10 data intervals but explained those estimates are expected to be biased downward based on  
11 the theoretical analysis of Professor Roll.

12  
13  
14 **Q. DO YOU HAVE ANY OBSERVATIONS ABOUT HIS COMMENT ABOUT**  
15 **DIFFERENTIAL INFORMATION AT PAGE 12?**

16 A. Yes. It is puzzling and inconsistent with his other testimony. Mr. Reiker  
17 apparently believes markets are efficient or at least reasonably efficient. The term  
18 "efficiency" in this case means investors quickly re-price common stocks to take into  
19 account new information when it becomes available. At page 12, line 23, Mr. Reiker  
20 agrees with me that more information will tend to be generated for larger utilities than for  
21 smaller utilities. But then he suggests markets are not efficient and that investors will not  
22 know about the larger amount of information being generated for the larger utilities. Mr.  
23 Reiker can't have it both ways. If markets are efficient, there will be more information  
24 known about larger utilities than smaller ones, providing a conceptual reason for a small  
25 firm effect in the utility industry.

1                   8.     Staff's criticisms of my paired difference test are wrong because the  
2                   paired observations are dependent.

3     **Q.     AT PAGE 13, MR. REIKER COMMENTS ABOUT YOUR DISCUSSION OF THE**  
4     **PAIRED DIFFERENCE TEST. DO YOU HAVE A RESPONSE?**

5     A.     Yes. His comments on the appropriateness of the paired difference test are wrong because  
6             the paired observations are dependent. The crux of issue of whether a paired difference  
7             test is more appropriate than Mr. Reiker's confidence interval test is whether the two sets  
8             of equity cost estimates for small and large utilities are independent or not. Mr. Reiker  
9             states at page 14, lines 2-4, "Dr. Zepp cannot claim that the large water utilities and the  
10            small water utilities in the Zepp study are not independent samples." It is obvious from  
11            even casual examination of Exhibit TMZ-R4, Page 4 of 5, that the two samples of equity  
12            costs for small and large water utilities are highly correlated and dependant. This is not  
13            surprising since estimated returns for small and large water utilities are both related to  
14            expected market returns and interest rates, both of which vary over time and in turn cause  
15            expected water utility returns for both small and large utilities to vary correspondingly.  
16            That is exactly what finance theory predicts. Mr. Reiker agrees with this obvious point  
17            when he says "the cost of equity moves in the same direction as interest rates" (page 26,  
18            line 10 of Mr. Reiker's Surrebuttal). That is why it is essential to pair observations over  
19            time as I did. If observations are not paired then it is equally likely to observe a large  
20            water utility equity cost estimate from 1987, the year of highest estimated equity costs for  
21            both small and large utilities, with a small water utility equity cost estimate for 1997, the  
22            year of lowest estimated equity costs for both samples.

23                   It is clear if you assume independence, as Mr. Reiker does, that variation from year  
24  
25  
26



1 to year for both small and large water utilities due to variation in interest rates will  
2 overwhelm variation between small and large utilities. In fact, the difference between the  
3 smallest and largest estimated equity costs for large companies is 5.84% and for small  
4 utilities is 6.34%. The largest difference between small and large equity cost estimates is  
5 1.94%. Mr. Reiker's test relies on this year-to-year variation and the correlation between  
6 estimated returns for small and large utilities to overwhelm the small differences in return  
7 to reject a premium for small utilities. That is shoddy statistical analysis.  
8

9 **Q. DO YOU HAVE ANY ADDITIONAL EVIDENCE THAT YOUR TWO SAMPLES**  
10 **ARE NOT INDEPENDENT?**

11 A. Yes. If Mr. Reiker's clouded vision in examining my data does not allow him to observe  
12 the obvious correlation and dependence in the samples, I calculated the correlation  
13 coefficient between the two samples. The correlation coefficient is .93 and it is significant  
14 at greater than 99% confidence.  
15

16 **Q. DO YOU HAVE ANY OTHER COMMENTS ABOUT MR. REIKER'S**  
17 **DISCUSSION OF YOUR PAIRED DIFFERENCE ANALYSIS?**

18 A. Yes. At page 15, lines 18-19, Mr. Reiker states "A paired difference test is only  
19 appropriate when we have a paired sample; that is, a sample where we have pairs of  
20 values." I agree completely. That is why I used a paired difference test. The  
21 observations are estimated equity costs paired by year. Failure to pair returns by year  
22 ignores the dependence of estimated equity costs on interest rates which vary significantly  
23 year-by-year. Mr. Reiker ignores the dependence of equity costs on interest rates in  
24 responding to my analysis, a dependence he admits by stating the cost of equity depends  
25  
26

1 on the level of interest rates at page 26 of his surrebuttal testimony.

2  
3 9. A .05 level of significance is not appropriate when estimating betas.

4 Q. AT PAGE 16, MR. REIKER QUOTES FROM "HOW TO LIE WITH  
5 STATISTICS". DOES THE QUOTE APPLY TO THE TESTIMONY AND  
6 ANALYSES YOU MADE?

7  
8 A. No. I agree with Darrell Huff that "for most purposes nothing poorer than a .05 percent  
9 level of significance is good enough". But estimating costs of equity and betas is not  
10 "most purposes". My study shows that in 10 out of 11 years small water utilities had  
11 estimates of equity costs that are higher than the equity cost estimates for larger water  
12 utilities being regulated by the same regulatory commission. Mr. Reiker apparently won't  
13 be satisfied unless the analysis shows 11 out of 11 years. Also, I reported that the  
14 difference in the costs of equity for the larger and smaller utilities was significant at the  
15 10% level. Those who reviewed my paper at *The Quarterly Review of Economics and*  
16 *Finance* were satisfied with a significance level of 10%. The Wong article can no longer  
17 be used to justify denying small water utilities a risk premium they require.  
18

19  
20 F. Data problems and the Wong paper support a higher equity cost for Arizona  
21 Water.

22 Q. DO YOU HAVE ANY COMMENTS ABOUT HIS TESTIMONY REGARDING  
23 STATISTICAL TESTS AT PAGE 17?

24 A. Yes. First, he references the Wong study. I have pointed out that, if any weight is given  
25 to the Wong paper, her study supports small utility stocks being more risky than larger  
26

1 ones. Wong's Table 2 reports beta risk for utilities in two periods. In one of those  
2 periods, her analysis shows that the smaller utilities have higher estimated betas. In the  
3 other period, her Table 3, shows there is a statistically significant (at the 10% level) small  
4 firm effect. Evidence in the Wong paper supports the use of the one-tailed test, not the  
5 two-tailed test.  
6

7 Second, he points out data problems may explain the small firm effect. What he  
8 fails to note, however, is that "data problems" have long been known to lead to a  
9 downward bias in beta estimates. Data problems result when small utility stocks are  
10 thinly-traded, leading to negatively biased beta estimates. The bottom line is that if the  
11 small firm effect is not there, the beta estimate for the small firms will be bigger. Either  
12 way, small utilities like Arizona Water require higher equity returns than the larger water  
13 utilities in Mr. Reiker's sample.  
14

15 **G. Staff's CAPM approach does not correct for all of the negative bias in utility**  
16 **equity cost estimates.**

17 **Q. AT PAGES 18-20, HE RESPONDS TO YOUR COMMENTS ABOUT CAPM. AT**  
18 **PAGE 19 HE SAYS THE CAPM TESTS YOU CITE CANNOT BE COMPARED**  
19 **TO THE STAFF METHOD. DO YOU AGREE?**  
20

21 **A.** No. Mr. Reiker contends that the tests I cite cannot be compared to the Staff approach  
22 because Staff uses intermediate-term Treasury rates (not T-bills) and adjusted betas (not  
23 raw betas). He is wrong. First, it is easy to show – as I explained in my rebuttal  
24 testimony at page 49 – that moving to intermediate-term Treasury rates eliminates only a  
25 small part of the bias. On average, intermediate-term Treasury rates have yields that are  
26

1 only 100 basis points above T-bill rates but, based on the results of the Fama-MacBeth  
2 study, the zero-beta asset requires, on average, a return that is 476 basis points higher than  
3 the average intermediate-term Treasury rate. Also, with respect to long-term versus  
4 intermediate term Treasury rates, if indeed a "liquidity risk premium" is a problem, it is  
5 just as a much a problem with intermediate-term Treasury rates as with long-term  
6 Treasury rates.  
7

8 The second point he raises is more difficult to address because it is technical. The  
9 Fama-MacBeth and the Black, Jensen Scholes ("BJS") studies were based on portfolios of  
10 estimated betas being used to forecast subsequent returns for portfolios – not raw betas  
11 for individual stocks – and did not adjust the portfolio betas. Mr. Reiker is correct that  
12 using adjusted *Value Line* betas will produce higher equity costs than raw unadjusted  
13 betas. The issue, however, is whether the *Value Line* adjustment is sufficient to eliminates  
14 the bias in the Sharpe-Lintner version of CAPM. Black revisited the BJS estimates in  
15 1993 and used the same methods used by BJS in their original study. (I discuss Black's  
16 paper at page 47 of my rebuttal testimony). Black certainly knew about the method *Value*  
17 *Line* and others used to adjust betas because Marshall Blume ("Betas and their Regression  
18 Tendencies," *Journal of Finance*, Vol. XXX, No. 3, June 1975) had published his paper  
19 showing such adjustments improved beta forecasts years before Black published the  
20 update of BJS. Based on that time-line, I disagree with Mr. Reiker's assumption that  
21 using betas adjusted toward the market eliminates the bias. Black tells us "I am especially  
22 proud of the 'portfolio method' we [BJS] used. Nothing I have seen since 1972 leads me  
23 to believe that we can gain much by varying the method of analysis (Fischer Black,  
24  
25  
26

1 "Return and Beta," *The Journal of Portfolio Management*, Vo. 20, No. 1 (Fall 1993),  
2 page 11). Black chose not to adjust raw betas in his tests, but instead used the portfolio  
3 approach instead of adjusted betas. And, Black still found the risk-return line to be flatter  
4 than the Sharpe-Lintner version of CAPM and thus consistent with the zero-beta CAPM.  
5

6 **H. Responses to Mr. Reiker's comments about DCF estimates.**

- 7 1. **DPS growth provides the worst measure of growth for the constant-**  
8 **growth DCF model and such growth estimates should be excluded**  
9 **from constant growth estimates.**

10 **Q. AT PAGE 20 MR. REIKER RESPONDS TO YOUR COMMENTS ABOUT**  
11 **INCLUDING DIVIDENDS PER SHARE GROWTH TO MAKE DCF EQUITY**  
12 **COST ESTIMATES. DO YOU HAVE A RESPONSE?**

13 A. Yes. Mr. Reiker correctly summarizes my testimony by acknowledging I said past DPS  
14 growth and near-term forecasts of PDS growth are the worst indicators of future growth to  
15 use in the constant growth DCF model. I explain in my rebuttal testimony (pages 53-55)  
16 why that is the case and why such measure of growth do not belong in estimates of growth  
17 for the constant growth DCF model. I agree with Mr. Reiker that forecasts of DPS growth  
18 should be included in a multi-stage DCF model for the first few years of such an analysis  
19 (see Zepp rebuttal at pages 57-60), but strongly disagree that such past and near-term  
20 forecasts of DPS growth belong in the constant growth model for the reasons stated at  
21 pages 53-55 of my rebuttal testimony.  
22

- 23  
24 2. **It is appropriate to include a second-stage of growth in a multi-stage**  
25 **growth DCF model that reflects reasonable expectations of subsequent**  
26 **growth by investors.**

1 Q. AT PAGES 23-24, MR. REIKER STATES YOUR MODIFICATIONS TO HIS  
2 MULTI-STAGE DCF MODEL ARE NOT APPROPRIATE. DO YOU HAVE A  
3 RESPONSE?  
4

5 A. Yes, at page 23 he states I injected a "supernormal" growth stage between the first and  
6 second stages of growth in his model. And at page 24, he contends that recognizing *Value*  
7 *Line's* projections of BR growth to determine investors' expectation of growth in the new  
8 second stage is inappropriate. At page 22, Mr. Reiker acknowledges Professor Myron  
9 Gordon as an authority on growth rates to use in the DCF model. In February 1999,  
10 several months after the speech Mr. Reiker quotes at page 22, Professor Gordon was  
11 asked by NW Natural Gas, an Oregon natural gas utility, and the Oregon PUC to make a  
12 presentation on methods to determine equity costs. As part of his preparation for the  
13 conference, Dr. Gordon reviewed the methods I had used to prepare equity cost estimates.  
14 The parties hoped his presentation would subsequently help the parties reach a settlement  
15 on an appropriate return on equity. (Unfortunately, a settlement could not be reached, and  
16 the case went to hearing.)  
17  
18

19 Rejoinder Table 4 is Exhibit 5007 in Oregon PUC Docket 132. It is an electronic  
20 mail from Dr. Gordon to Susan Ackerman, an employee of NW Natural Gas. In it, Dr.  
21 Gordon refers to a "Z" factor I had used to determine second stage growth that reflected  
22 potential future increases in DPS growth when DPS was expected to grow more slowly  
23 than EPS in the first stage. Dr. Gordon agreed with my approach. Contrary to what Mr.  
24 Reiker says at page 24, Professor Gordon said:  
25

26 In short, there is good reason to believe that a higher rate of growth in  
earnings than in dividends in the near future will lead to a higher growth

1 rate in dividends subsequently.

2 That was the situation in the NW Natural case and that is the situation today in this case.  
3 Contrary to Mr. Reiker's criticism of me inserting a second stage of growth, it is an  
4 insertion that is consistent with Dr. Gordon's analysis of a similar situation in another case.  
5 And also contrary to Mr. Reiker's statement, it is reasonable to assume "a higher growth  
6 rate in dividends subsequently". In my view, it is certainly reasonable for investors to  
7 expect dividend growth in the "subsequent" period (the second period) to reflect sustainable  
8 growth estimated with the *Value Line* data for 2006-2008. My revision of Mr. Reiker's  
9 multi-stage model is totally consistent with Dr. Gordon's comments in Rejoinder Table 4:  
10

11  
12 I. Equity costs have increased since Mr. Reiker and Mr. Rigsby prepared their  
13 cost of equity estimates but they have left their recommended ROEs  
14 unchanged.

15 Q. DO YOU HAVE ANY CONCLUDING REMARKS?

16 A. Yes. I updated my equity cost estimates when I prepared rebuttal testimony.

17 Interest rates have increased substantially since Mr. Reiker and Mr. Rigsby  
18 prepared their direct testimonies, but neither witness has proposed an increase in his  
19 recommended ROE. I do not update Mr. Rigsby's 91-day rates because they are not  
20 relevant to the period in which new rates will be set. His 91-day rate ends in 2003 and  
21 reflects a cost of money that exists many months before it is realistic for new tariffs to be  
22 approved. Rejoinder Table 5 shows Mr. Reiker's average of Treasury note rates has  
23 increased by 70 basis points since the time he prepared testimony. Rejoinder Table 3 also  
24 shows current rates are now within 55 basis points of the average intermediate-term  
25 Treasury rates forecasted by Blue Chip in June of 2003.  
26

1 I have two observations. One is that the cost of equity is higher now than when  
2 Mr. Reiker and Mr. Rigsby prepared their respective testimonies. The other point is the  
3 difference between actual and forecasted interest rates is less than the difference in rates  
4 found by updating the interest rates Mr. Reiker relies upon in his analysis.

5 I explained why the relevant interest rates to use in this case are forecasted rates  
6 that start no sooner than 2004. This is because new tariffs will be authorized no sooner  
7 than early 2004 and Mr. Reiker's own analysis shows Blue Chip forecasts that I rely upon  
8 are not biased. But in addition to the forecasted rates being the conceptually correct rates  
9 to consider, the current Treasury rates are much closer to the forecasts made by Blue Chip,  
10 than they are to interest rates Mr. Reiker relied upon when he prepared his direct  
11 testimony.  
12

13 **Q. DOES THIS COMPLETE YOUR PREFILED REJOINDER TESTIMONY?**  
14

15 **A. Yes.**  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26



# EXHIBITS

Arizona Water Company

Rejoinder Table 1  
Differences in Current, Past and Forecasts Premiums  
of Baa Rates over 10 Year Treasury Rates

Past Periods <sup>a/</sup>	Average Baa Rate	Average 10 Year Treasury Rate	Average Premium	Difference Between Premium in Current period and in 1982-1998 Period
1982-1998	10.33	8.33	2.00	
1999-2002	8.00	5.32	2.67	0.67
2001-2002	7.87	4.81	3.06	1.06
Forecasts <sup>b/</sup>				
2004	7.1	4.6	2.50	0.50
2005	7.7	5.3	2.40	0.40

Sources:

a/ Federal Reserve

b/ Blue Chip consensus forecasts, June 2003.

Arizona Water Company

Rejoinder Table 2

Regression Results<sup>a/</sup> and the Ability of Baa Rates  
and 10 Year Treasury Rates to Explain Equity Costs

Period	Regression Results		Number of Observations	R <sup>2</sup>
	Intercept	Slope		
<u>Baa rates explaining equity costs</u>				
1999 to 2002	0.062	0.614 (0.2258) <sup>-b/</sup>	35	18.3%
1982 to 2002	0.074	0.492 (0.0098) <sup>-b/</sup>	464	84.5%
<u>10yr Treasury Rates explaining equity costs</u>				
1999 to 2002	0.096	0.279 (0.1552) <sup>-b/</sup>	35	8.9%
1982 to 2002	0.080	0.553 (0.0121) <sup>-b/</sup>	464	82.0%

Sources and Notes:

a/ Equity cost data is updated data for sample adopted in Table 23.  
Interest rates reported by the Federal Reserve.

b/ Standard error of slope coefficients in parentheses. All slope  
estimates statistically different from zero at .05 level.

Arizona Water Company

Rejoinder Table 3

Adjusted Beta Estimates Made by Dr. Zepp and ACC Staff

	Dr. Zepp's Estimates	Mr. Reiker's Estimates
Connecticut Water Service	0.74	0.60
Middlesex Water	0.64	0.61
SJW Corp	1.12	1.39
Average	0.83	0.87
Pooled beta estimates	0.78	0.83

Sources:  
Dr. Zepp's and Mr. Reiker's workpapers.

**Ackerman, Susan**

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From: Mike Gordon [gordon@mgmt.utoronto.ca]  
 Sent: Monday, July 26, 1999 12:06 PM  
 To: Ackerman, Susan  
 Subject: "Z" factor comments

To Whom It May Concern,

This is in response to a request by NW Natural that I comment on the use of a "Z" factor in the testimony of Dr. Zepp and the comments on the subject by Mr. Thornton.

**Exhibit TMZ-RJ4  
Page 1 of 1**

In his March 1999 direct testimony, Dr. Zepp arrived at an estimated average long run growth rate in the dividend to start four years in the future as the sum of the retention growth rate and a "Z" factor intended to capture the long run growth in the dividend due to the higher rate of growth in earnings than in the dividend.

Mr. Thornton rejected the Z factor on the grounds that he had never "seen or heard of it before" and no such factor is derived by me in my book.

My book, *The Cost of Capital to a Public Utility*, stated that "Under our model of security valuation, dividend, earnings and price per share, all are expected to grow at the same rate." (p.88) I then go on to suggest various reasons why investors might and might not use the rate of growth in earnings as the forecast growth rate. Specifically, on page 90, I discuss the case of

a firm that experiences a rise in its rate of return on assets and investment. For a variety of reasons, some related to this event, the firm may raise its investment rate and secure additional funds from retention. Specifically, the firm decides not to raise its dividend for a number of periods. The firm's rate of return and retention rate have gone up, and its expected future growth is higher, but the rate of growth in the dividend is zero over this period.

This is an extreme version of what may be taking place at NW Natural and other gas LDCs.

In short, there is good reason to believe that a higher rate of growth in earnings than in dividends in the near future will lead to a higher growth rate in the dividend subsequently.

The above principle can be implemented in a variety of ways and I am in no position to comment on whether Dr. Zepp used the best possible method and whether or not the numbers he used are correct. However, I do not believe that what Dr. Zepp did is wrong in principle.

---

MYRON J. GORDON, Professor of Finance  
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 Tel: (416)978-3427

Arizona Water Company

Rejoinder Table 5

An Update of Treasury Note Rates  
Relied Upon By Mr. Reiker and Forecasted by Blue Chip

Actual Rates	7-May-03	4-Sep-03	Difference
5-Year Treasury	2.74%	3.48%	
7-Year Treasury	3.38%	4.02%	
10-Year Treasury	3.80%	4.51%	
Average	3.31%	4.00%	0.70%

	Blue Chip Forecast		
Forecasts	for 2004-2005	4-Sep-03	Difference
5-Year Treasury	4.15%	3.48%	
7-Year Treasury	na	4.02%	
10-Year Treasury	4.95%	4.51%	
Average	4.55%	4.00%	-0.55%

